

Contract No. : DC/2007/06
**River Improvement Works in Upper Lam Tsuen,
She Shan River and Upper Tai Po River**

ENVIRONMENTAL MONITORING AND AUDIT

MONTHLY EM&A REPORT of

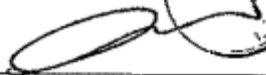

UPPER TAI PO RIVER

for July 2011


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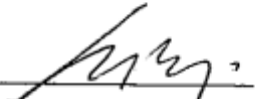
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Executive summary

This is the thirty-fifth monthly Environmental Monitoring and Audit (EM&A) Report for the river improvement works at Upper Tai Po River under Drainage Services Department Contract No. DC/2007/06 entitled “River Improvement Works in Upper Lam Tsuen River, She Shan River and Upper Tai Po River”. This report concludes the impact monitoring for the activities undertaken during the period from 1st July 2011 to 31st July 2011. Provision of temporary protection measures for wet season was the major site activity being carried out in this reporting period.

The Environmental Team (ET) is responsible for the EM&A works required in the EM&A manual. Site inspections were carried out on weekly basis to investigate and audit the equipment and work methodologies with respect to pollution control and environmental mitigation. The weekly inspections records and photos taken were kept.

Ecological impact monitoring was conducted on 21st July 2011 by the Ecologist Dr. Mark Shea. The ecological impact monitoring report prepared by the Ecologist is still under preparation and the report will be provided in the next monthly report. Next ecological monitoring was arranged in January 2012. The summary of ecological site inspection findings and implementation status of environmental protection and mitigation for ecology, prepared by the Ecologist, are provided in table 6.2 and Appendix G respectively.

Environmental Team had carried out construction noise monitoring on weekly basis and no exceedance was found. Noise monitoring records for the reporting month and the data is presented in Section 4. The location plan and the graphical plots presenting the data are provided in Appendix D.

Piling works has been omitted. Therefore, no vibration monitoring was conducted by ET during the reporting month.

There was no non-compliance events recorded in this reporting month.

There was no formal complaint in relation to environmental issue received in the reporting month.

There was no breach of action and limit levels for this reporting month.

There was no reporting change for this month.

In accordance with the contractual requirements, no excavation works in river is allowed to be carried out during wet season. No major construction activity will be carried out except provision of temporary protection measure for wet season

ET has reminded the contractor to provide environmental pollution control measures wherever necessary and to keep a good environmental management at site practice.

1.0 Introduction

This is the thirty-fifth monthly Environmental Monitoring and Audit (EM&A) Report for the river improvement works at Upper Tai Po River under Drainage Services Department Contract No. DC/2007/06 entitled “River Improvement Works in Upper Lam Tsuen River, She Shan River and Upper Tai Po River”. The site layout plan is shown in Figure 2.1. The Environmental Team, Environmental Pioneers & Solutions Limited appointed by Chiu Hing Construction and Transportation Company Limited, prepares the report. The report is to be submitted to the Contractor, the Engineer and the IEC.

This report presents the results of the environmental monitoring of the project activities for Upper Tai Po River conducted during the month of July 2011. This included regular site inspections once per week for verification of implementation of the mitigation measures as recommended in the Environmental Permit (EP-223/2005/A) (EP), EM&A Manual and the Contractor’s Environmental Management Plan (EMP).

2.0 Environmental status

2.1 Project area

The location of the project site – Upper Tai Po River starting from Ta Tit Yan of Yai Mo Shan, the Upper Tai Po River flows from southeast to northeast alongside Wilson Trail, turning northward before joining the Lam Tsuen River and then runs towards Tai Po Market. To the east of the river, there are active and abandoned cultivated lands. While the village settlements are mainly located on the west and northeast side of the river bank, where the San Uk Ka and Lai Chi Shan establishment also lie. The Project site is indicated in **Figure 2.1**.

2.2 Construction programme

Approximately 0.6km of Upper Tai Po River will be improved to enhance the hydraulic performance of the river. The improvement works comprise the following:

- (1) Re-profiling and realignment of the Channel;
- (2) Inclusion of gabions and retaining wall for bank protection whilst providing a natural channel bed; and
- (3) Re-provisioning of footbridges and footpaths along the channel

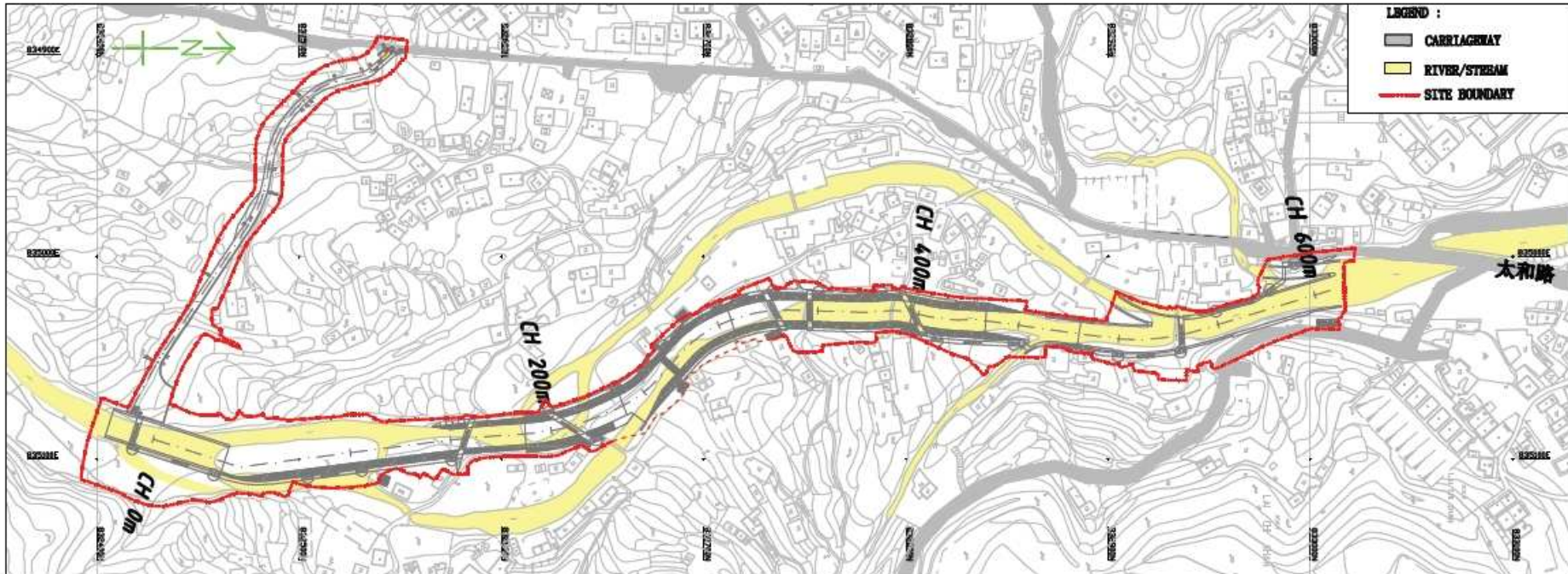
The construction of the proposed improvement works for Upper Tai Po River has been commenced on September 15th 2008 and anticipated to complete in April 2012.

2.3 Proposed construction sequences

The proposed construction sequence is shown in the following sequences:

- (1) Site clearance and preparation works
- (2) Construction of the maintenance access which involves the construction of retaining walls
- (3) River channel construction and excavation, involving the excavation works, construction of retaining walls and gabion walls
- (4) Re-provisioning of footbridges
- (5) Construction of footpaths
- (6) Landscaping works

Fig 2.1 Layout of construction area



Upper Tai Po River

2.4 Construction activities for the reporting period

Major construction activity carried out by the contractor during this reporting period includes:

- 1.) Provision of temporary protection measures for wet season

2.5 Construction activities for the next reporting period

- 1.) No major construction activity will be carried out except provision of temporary protection measure for wet season

2.6 Exceedance with the environmental performance limits

There was no exceedance with the environmental performance limits for this reporting month. The event and action plan for Ecology is shown in Appendix A. The action and limit level for Noise is shown in Appendix B. The reference standards for vibration are shown in Appendix C.

2.7 Summary of complaints

No formal complaint in relation to environmental issues was received in the reporting month. Totally seventeen complaints had been received since the commencement of the contract. The cumulative complaint log is shown in Appendix F.

3.0 Ecological monitoring results

Ecological impact monitoring was conducted on 21st July 2011 by the Ecologist Dr. Mark Shea. The ecological impact monitoring report prepared by the Ecologist is still under preparation and the report will be provided in the next monthly report. The next ecological impact monitoring was arranged on January 2012.

4.0 Noise monitoring results

In accordance with the EM&A Manual, monitoring locations were established at 11 N.S.R. locations. The descriptions of all 11 N.S.R. are shown in Table 4.1.

TABLE 4.1 Description of Noise Sensitive Receivers

Sensitive Receiver No.	Location and Description
UTP1	54B, Sheung Wun Yiu
UTP2	Village House in Lai Chi Shan
UTP3	Village House near Upper Tai Po River
UTP4	Village House near Upper Tai Po River
UTP5	Village House near Upper Tai Po River
UTP6	Village House near Upper Tai Po River
UTP7	Village House near Upper Tai Po River
UTP8	Village House near Upper Tai Po River
UTP9	49A, Pun Shan Chau
UTP10	Village House near the proposed access road
UTP11	49G, San Uk Ka

Noise monitoring was carried out by the Environmental Team on weekly basis for this reporting month. The scheduled monitoring dates were 1st, 8th, 15th, 22nd and 29th July 2011. Because 1st July 2011 was public holiday, the monitoring date for that week was rescheduled to 29th June 2011. Measured $L_{eq(30min)}$ results ranged from 42.1dB(A) to 66.0dB(A). And therefore, no exceedance was recorded on within the reporting period.

For further details of the monitoring results, graphical plots and the location plan, please refer to the Appendix D.

5.0 Vibration monitoring results

There was no vibration monitoring results for this reporting month. Vibration monitoring will be started once the piling works start in Upper Tai Po River.

6.0 Environmental issues and actions

6.1 Site inspections and key environmental issues

Site inspections were undertaken routinely to inspect the construction activities in Upper Tai Po River to ensure that appropriate environmental protection and pollution control mitigation measures are properly implemented. Implementation status of environmental protection and mitigation measures is shown in Appendix G.

Within this reporting month, site inspections were conducted on 6th, 13th, 21st, and 27th July 2011. A detailed checklist of each site inspection together with comments and relevant photos have been filed and kept. The findings from inspection were summarized in Table 6.1.

Ecological inspections by the Ecologist Dr. Mark Shea were carried out on 1st, 11th, 18th, 25th and 30th July 2011. Details of findings were summarized in Table 6.2.

Table 6.1 Summary results of site inspections findings

Date	Findings	Identification	Advice from ET	Action taken	Closing date	Remarks
4 May 11	Muddy surface runoff was observed discharging directly into the river without any proper treatment at approximate ch.100	Non-compliance	Contractor was seriously recommended to rectify the mitigation measures for surface runoff and divert the muddy site water for treatment properly prior to discharging into the river	No muddy runoff was observed.	6 Jul 11	--
15 June 11	The concrete lorry mixer filling the concrete funnel was very close to the river at Upper Tai Po River near	Observation	Contractor was advised to relocate the process away from the river to prevent spilling of concrete to the river and river contamination.	The concerned concrete lorry mixer close to the river was removed by Contract. No activity potentially causing river contamination was observed.	27 Jul 11	--
22 June 11	Stockpiles of earthy materials leading to muddy generation were observed at ch.600 of UTPR	Observation	Contractor was advised to remove it and to provide mitigation measures to prevent river contamination.	The stockpiles of earthy materials under the retaining wall were removed by Contractor as preventive	27 Jul 11	--

Date	Findings	Identification	Advice from ET	Action taken	Closing date	Remarks
				measure for surface run-off and river contamination		
22 June 11	No proper fencing for the tree B274D was observed at ch.0 of UTPR.	Observation	Contractor was reminded to rectify the discrepancy as soon as possible.	To be followed during the next reporting period.	Ongoing	--
29 June 11	Water was accumulated inside the construction holes at ch.400 of UTPR and mosquito breeding was observed.	Observation	Contractor was advised to remove the stagnant water and fill the concaved area of the cover with sand to prevent the accumulation of stagnant water.	The concerned construction holes were filled with sand by Contractor to avoid water accumulation and mosquito breeding	6 Jul 11	--
13 Jul 11	No particular observation	N/A	N/A	N/A	N/A	--
21 Jul 11	General refuse, construction waste and construction material were observed to be near the trees at approximate ch.400.	Observation	The Contractor was reminded to remove these materials and to implement good housekeeping practices. Also Contractor was reminded to protect the trees inside the Site from any possible causes of damage.	To be followed during the next reporting period.	Ongoing	--
27 Jul 11	The Environmental Permit (EP) was missing at the Site entrance of UTPR	Observation	Contractor was urged to display the EP as soon as possible.	To be followed during the next reporting period.	Ongoing	--
27 Jul 11	General refuse and construction waste were observed to be near the trees at approximate ch.400	Observation	Contractor was reminded to remove these materials and to implement good housekeeping practices. Also Contractor was reminded to protect the trees inside the Site from any possible causes of damage.	To be followed during the next reporting period.	Ongoing	--

The summary of ecological inspection prepared by the Ecologist, Dr. Mark Shea is shown in Table 6.2.

Date	Observations	Advice from Ecologist	Action Taken	Closing Date
01 July 2011	No Major findings for this inspection	No Advice is required	No Action is required to be taken	N/A
11 July 2011	No Major findings for this inspection	No Advice is required	No Action is required to be taken	N/A
18 July 2011	No Major findings for this inspection	No Advice is required	No Action is required to be taken	N/A
25 July 2011	No Major findings for this inspection	No Advice is required	No Action is required to be taken	N/A

30 July 2011	No Major findings for this inspection	No Advice is required	No Action is required to be taken	N/A
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6.2 Non-compliance

There was no non-compliance events recorded in this reporting month.

6.3 Recommendations

Contractor was recommended to implement necessary measures in mitigating water quality impact arisen from construction activities. Riverbanks and earth bunds should be covered with geo-textile coverings to prevent erosion.

Sufficient and effective site water treatment facilities should be provided on site. Any wastewater, surface run-off and muddy effluent within site area should be diverted for treatment before discharge.

Also, Contractor was reminded to implement good housekeeping practice. Contractor shall assign proper waste collection area for segregation and storage before disposal. All waste generated should be properly collected, stored, and disposed as soon as possible to improve housekeeping performance of the construction site.

As in wet season, frequent rainfall is expected. Contractor was reminded to minimize exposed soil surface and open stockpiles of construction materials by tarpaulin or geo-textile coverage to prevent run-off of muddy water and washing away of debris or silt into river and drainage system. Contractor was also reminded to remove stagnant water on site to prevent mosquito breeding.

6.4 Implementation status and effectiveness of the mitigation measures

Refer to the table 6.1 and Section 6.2, contractor was seriously recommended to implement necessary mitigation measures to address environmental problem arisen from site activities, especially issue of site water control and protection of bared earth surfaces.

7.0 Waste management status

It is the contractor's responsibility to ensure that all wastes produced during construction phase for the drainage improvement works are handled, stored and disposed of in accordance with good waste management practices and EPD's regulation and requirement. Waste materials generated during construction activities such as construction and demolition(C&D) material, chemical wastes and general refuse, are recommended to be audited at regular intervals to ensure that proper storage, transportation and disposal practices are being implemented. **Table 7.1** is the Waste Disposal recorded by the Contractor in this month.

From the report of Contractor, C&D materials generated, were all reused and therefore no inert waste was disposed from the project.

The following table showed amount of waste generation, reused and disposed from this project site in this reporting month.

Table 7.1 Summary of Waste generated and disposed in July 2011

Type of waste	Amount generated	Amount reused	Amount disposed
Inert waste	0	0	0
Non-inert waste	0	0	0
Chemical waste	0	N/A	0

The cumulative waste flow table is shown in Appendix H.

8.0 Status of environmental licensing and permit

This project requires different permits and licenses to be run legally. **Table 8.1** is the summary of permits/ licenses for this project.

Table 8.1 Summary of Environmental Licensing and Permit Status

Description	License / Permit No.	Date of Issue	Date of Expiry	Remarks
Environmental Permit	EP-223/2005	31 st Aug, 2005	N/A	Superseded
Amended Environmental Permit	EP-223/2005/A	18 th Nov, 2008	N/A	Issued
Construction Noise Permit	N/A	N/A	N/A	N/A
Effluent Discharge License	3678	14 th Mar, 2008	31 st Mar, 2013	Issued
Registration as a Chemical Waste Producer	5213-724-C3251-03	19 th Dec, 2007	Not applicable	Issued
Billing Account for Disposal of Construction Waste	7006101	N/A	N/A	N/A

9.0 Future key issues

According to the contractual requirements, no excavation works in rivers is allowed in wet season. No major construction activity will be carried out in the upcoming month.

To minimize water quality impact arising from construction activities within river channel, water quality mitigation measures should be implemented as far as practicable. Any muddy water, underground water or wastewater generated from construction activities should be diverted to proper treatment facility prior to discharge.

Contractor was reminded to provide regular water spraying to dusty static area for dust suppression. Excessive storage of stockpile and exposed of earth surfaces should be prevented to minimize air quality impact arisen by wind erosion.

Contractor is advised to assign a site area for temporary waste storage and segregation. Wastes accumulation should be prevented on site; licensed waste collection and disposal should be implemented regularly for hygiene issues.

As in wet season, frequent rainfall is expected. Contractor was reminded to minimize exposed soil surface and open stockpiles of construction materials by tarpaulin or geo-textile coverage to prevent run-off of muddy water and washing away of debris or silt into river and drainage system. Contractor was also reminded to remove stagnant water on site to prevent mosquito breeding.

10.0 Conclusion

Provision of temporary protection measures for wet season was the major site activity carried out by the Contractor in this reporting period.

Regular site meetings and inspection audits led by the seniors for discussing environmental issues were held among project proponent, Contractor and the Environmental Team on weekly basis.

Environmental Team had carried out construction noise monitoring on weekly basis. All results obtained were within limit and therefore no exceedance was recorded in this reporting month.

Piling works has been omitted. Therefore, no vibration monitoring was conducted during the reporting month.

From the summary of ecological site inspection findings and implementation status of environmental protection and mitigation for ecology, prepared by the Ecologist Dr. Mark Shea, there is no abnormal finding observed in the reporting month. The ecologist has no further advice and no action suggested to the contractor.

Ecological impact monitoring was conducted on 21st July 2011 by the Ecologist Dr. Mark Shea. The ecological impact monitoring report prepared by the Ecologist is still under preparation and the report will be provided in the next monthly report. Next ecological monitoring was arranged in January 2012.

There was no non-compliance events recorded in this reporting month.

There was no formal complaint in relation to environmental issue received in the reporting month.

The ET will continue to implement the environmental monitoring & audit programme in accordance with the EM&A Manual and Environmental Permit requirement.

Appendix A: Event and action plan for ecology

Event and action plan for ecology

In the event of non-compliance, the Event / Action plan prepared by the ecologist shall be followed. Detailed Event/ Action plan was shown in **Appendix Table 1** for reference.

It is not proposed to set population size of the three species (i.e. Three-lined Chinese Stream Catfish, Predaceous and the Hong Kong Newt) or other faunal species for the Action Level and Limit Level in the revised EM&A manual in considering the following reasons:

- I. The schedule capture surveys would let to decrease in the populations of the target species; and
- II. The planned drainage works would also temporally de-fauna the stream habitat.

It is considered logical and appropriate to audit non-compliance events in relation with ecological mitigation measures, which were specified in the EP and the PS of the project.

APPENDIX TABLE 1 Event / Action plan table for Ecology

Event	Action			
	ET	ER	IEC	Contractor
Non-conformity on one occasion	1. Identify Source 2. Inform the IEC and the ER 3. Discuss remedial actions with the IEC, the ER and the Contractor 4. Monitor remedial actions until rectification has been completed	1. Check report 2. Check the Contractor's working method 3. Discuss with the ET and the Contractor on possible remedial measures, 4. Advise the Contractor on effectiveness of proposed remedial measures 5. Check implementation of remedial measures	1. Ensure Remedial measures are properly implemented	1. Amend working methods 2. Rectify damage and undertake any necessary replacement
Repeated Non conformity	1. Identify Source 2. Inform the IEC and the ER 3. Increase monitoring frequency 4. Discuss remedial actions with the IEC, the ER and the Contractor 5. Monitor remedial actions until rectification has been completed 6. If exceedance stops, cease additional monitoring	1. Check monitoring report 2. Check the Contractor's working method 3. Discuss with the ET and the Contractor on possible remedial measures 4. Advise the Contractor on effectiveness of proposed remedial measures 5. Check implementation of remedial measures	1. Ensure Remedial measures are properly implemented	1. Amend working methods 2. Rectify damage and undertake any necessary replacement

Appendix B: Action and limit level for construction noise

The Action and Limit levels for construction noise are defined in **Appendix Table 2**

Appendix Table 2: Action and Limit Levels for Construction Noise

Time Period	Action	Limit
0700 – 1900 hrs on normal weekdays	When one documented complaint is received	75 dB(A)*
0700 – 2300hrs on holidays; and 1900 – 2300 hrs on all other days		Subject to the control of Noise Control Ordinance
2300 – 0700 hrs of next day		Subject to the control of Noise Control Ordinance

*Limit level set in accordance with Particular Specification Section 26

Appendix C: Reference standards for vibration

Guidance regarding vibration limits is provided by the following British Standards (or their equivalent ISO standards):

BS 7385 - Measurement and evaluation of vibration in buildings. Part 2: Guide to damage levels from ground borne vibration.

BS 7385 suggests vibration levels, below which damage is unlikely to occur in 95% of buildings. For cosmetic damage, the level is 15 mm/s at 4 Hz, increasing to 20 mm/s at 15 Hz, increasing to 50 mm/s at 40 Hz and above. Minor structural damage is possible at vibration levels twice those given above, major damage at four times the levels given.

Appendix Table 3: Transient vibration guide values for cosmetic building damage (BS7385:Part 2 1993)

	Type of Building	Peak component particle velocity (mm/s) in frequency range of predominant pulse
1	Reinforced or framed structures	50 at 4 Hz and above
2	Un-reinforced or light framed structures	15 at 4 Hz, increasing to 20 at 15 Hz, increasing to 50 at 40 Hz and above.

The vibration magnitudes and frequencies refer to Peak Particle Velocities (PPV) occurring in any single direction, measured on the ground level of the building concerned.

Appendix D: Noise monitoring results, graphical plots and location plan

Location	Leq 30min	L ₁₀ 30min	L ₉₀ 30min	Date	Time Duration	Major Construction Noise	Other Noise source	Weather	Location description
UTP 1	64.3	68.7	55.4	29-Jun-11	14:45-15:15	N/A	Traffic noise & Background noise	Rain	Façade
UTP 2	65.2	70.5	69.6	29-Jun-11	14:10-14:40	N/A	Traffic noise & Background noise	Rain	Façade
UTP 3	57.3	60.1	52.0	29-Jun-11	15:20-15:50	N/A	Background noise	Rain	Façade
UTP 4	61.2	65.3	57.2	29-Jun-11	13:36-14:06	N/A	Background noise	Rain	Façade
UTP 5	64.3	65.6	60.3	29-Jun-11	13:05-13:35	N/A	Background noise	Rain	Façade
UTP 6	60.1	65.3	46.0	29-Jun-11	9:55-10:25	N/A	Background noise	Rain	Façade
UTP 7	56.2	55.8	48.3	29-Jun-11	10:26-10:56	N/A	Background noise	Rain	Façade
UTP 8	58.0	58.9	57.2	29-Jun-11	11:00-11:30	N/A	Background noise	Rain	Façade
UTP 9	59.9	60.9	56.8	29-Jun-11	11:31-12:01	N/A	Background noise	Rain	Façade
UTP 10	50.5	58.4	46.5	29-Jun-11	15:55-16:25	N/A	Background noise	Rain	Façade
UTP 11	60.3	59.7	51.4	29-Jun-11	9:20-9:50	N/A	Background noise & Public noise	Rain	*Free field

Note* An Additional of 3dB(A) had been added to the measurement result due to Free Field Correction

Location	Leq 30min	L ₁₀ 30min	L ₉₀ 30min	Date	Time Duration	Major Construction Noise	Other Noise source	Weather	Location description
UTP 1	65.2	68.3	61.0	8-Jul-11	15:35-16:05	N/A	Traffic noise & Background noise	Cloudy	Façade
UTP 2	62.3	65.4	58.7	8-Jul-11	16:10-16:40	N/A	Traffic noise & Background noise	Cloudy	Façade
UTP 3	61.9	63.7	61.6	8-Jul-11	14:55-15:25	N/A	Background noise	Cloudy	Façade
UTP 4	56.6	57.4	55.3	8-Jul-11	14:15-14:45	N/A	Background noise	Cloudy	Façade
UTP 5	58.7	59.5	55.9	8-Jul-11	13:34-14:04	N/A	Background noise	Cloudy	Façade
UTP 6	54.8	55.5	46.8	8-Jul-11	10:10-10:40	N/A	Background noise	Cloudy	Façade
UTP 7	58.0	62.5	46.0	8-Jul-11	10:42-11:12	N/A	Background noise	Cloudy	Façade
UTP 8	56.0	57.0	54.9	8-Jul-11	11:15-11:45	N/A	Background noise	Cloudy	Façade
UTP 9	53.0	53.8	51.4	8-Jul-11	13:00-13:30	N/A	Background noise	Cloudy	Façade
UTP 10	52.1	54.2	43.5	8-Jul-11	16:50-17:20	N/A	Background noise	Cloudy	Façade
UTP 11	50.3	52.4	46.6	8-Jul-11	9:35-10:05	N/A	Background noise	Cloudy	*Free field

Note* An Additional of 3dB(A) had been added to the measurement result due to Free Field Correction

Location	Leq 30min	L ₁₀ 30min	L ₉₀ 30min	Date	Time Duration	Major Construction Noise	Other Noise source	Weather	Location description
UTP 1	66.0	69.1	54.6	15-Jul-11	16:25-16:55	N/A	Traffic noise & Background noise	Rain	Façade
UTP 2	63.4	64.8	50.5	15-Jul-11	15:50-16:20	N/A	Traffic noise & Background noise	Rain	Façade
UTP 3	58.4	61.3	48.4	15-Jul-11	15:15-15:45	N/A	Background noise	Rain	Façade
UTP 4	53.5	55.1	52.2	15-Jul-11	14:41-15:11	N/A	Background noise & Public noise	Rain	Façade
UTP 5	60.8	62.9	53.2	15-Jul-11	14:10-14:40	N/A	Background noise & Public noise	Rain	Façade
UTP 6	57.3	62.5	46.9	15-Jul-11	10:45-11:15	N/A	Background noise & Public noise	Rain	Façade
UTP 7	59.8	61.0	49.4	15-Jul-11	11:20-11:50	N/A	Background noise	Rain	Façade
UTP 8	64.3	67.8	58.2	15-Jul-11	13:00-13:30	N/A	Background noise	Rain	Façade
UTP 9	62.5	67.5	57.4	15-Jul-11	13:32-14:02	N/A	Background noise & Public noise	Rain	Façade
UTP 10	52.5	55.8	40.2	15-Jul-11	17:00-17:30	N/A	Background noise & Public noise	Rain	Façade
UTP 11	62.5	64.5	49.9	15-Jul-11	10:10-10:40	N/A	Background noise & Public noise	Rain	*Free field

Note* An Additional of 3dB(A) had been added to the measurement result due to Free Field Correction

Location	Leq 30min	L ₁₀ 30min	L ₉₀ 30min	Date	Time Duration	Major Construction Noise	Other Noise source	Weather	Location description
UTP 1	63.1	64.9	56.0	22-Jul-11	16:00-16:30	N/A	Traffic & Public noise , Background noise	Sunny	Façade
UTP 2	57.6	54.5	46.6	22-Jul-11	15:30-16:00	N/A	Traffic & Public noise , Background noise	Sunny	Façade
UTP 3	60.1	60.8	59.1	22-Jul-11	14:45-15:15	N/A	Background noise & Public noise	Sunny	Façade
UTP 4	50.9	51.5	49.0	22-Jul-11	14:00-14:30	N/A	Background noise & Public noise	Sunny	Façade
UTP 5	52.8	54.6	50.2	22-Jul-11	13:00-14:00	N/A	Background noise & Public noise	Sunny	Façade
UTP 6	57.0	51.9	46.6	22-Jul-11	10:00-10:30	N/A	Background noise & Public noise	Sunny	Façade
UTP 7	56.8	59.6	48.4	22-Jul-11	10:30-11:00	N/A	Background noise & Public noise	Sunny	Façade
UTP 8	56.0	56.8	55.1	22-Jul-11	11:00-11:30	N/A	Background noise & Public noise	Sunny	Façade
UTP 9	54.3	55.0	53.1	22-Jul-11	11:30-12:00	N/A	Background noise	Sunny	Façade
UTP 10	42.1	55.1	52.3	22-Jul-11	9:30-10:00	N/A	Background noise	Sunny	Façade
UTP 11	51.8	53.2	49.0	22-Jul-11	9:00-9:30	N/A	Background noise & Public noise	Sunny	*Free field

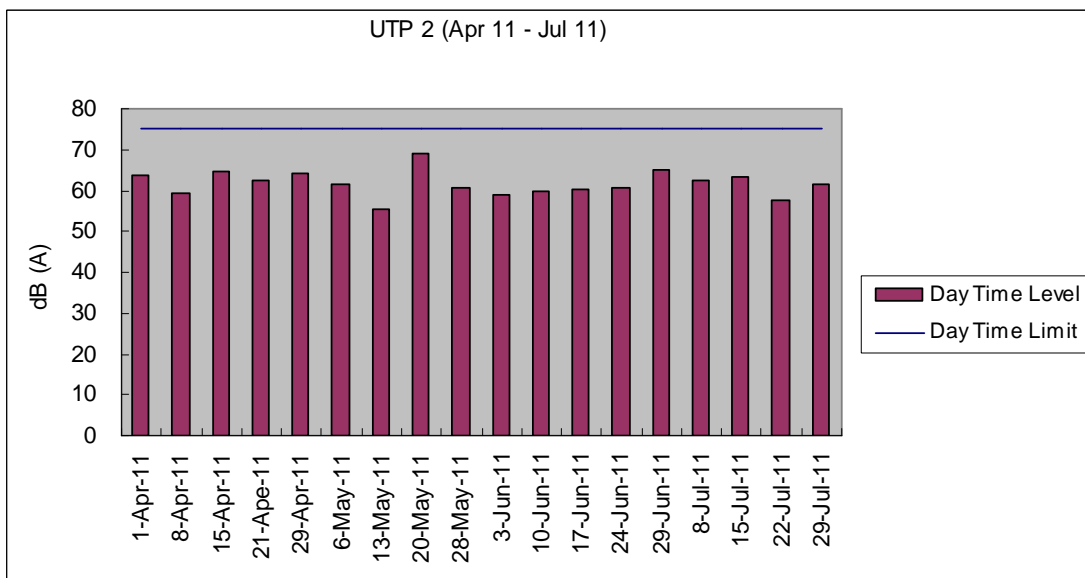
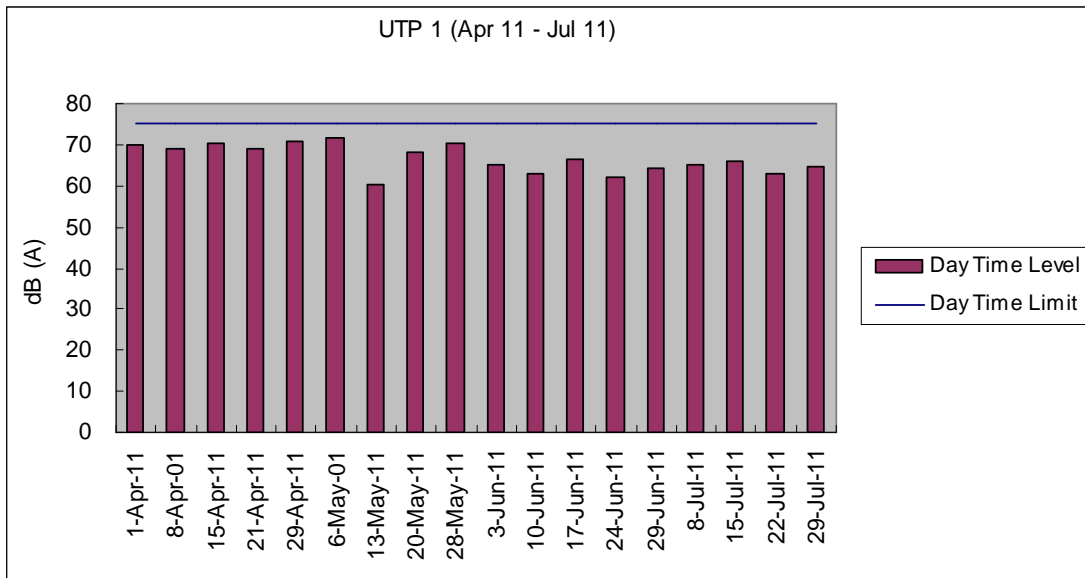
Note* An Additional of 3dB(A) had been added to the measurement result due to Free Field Correction

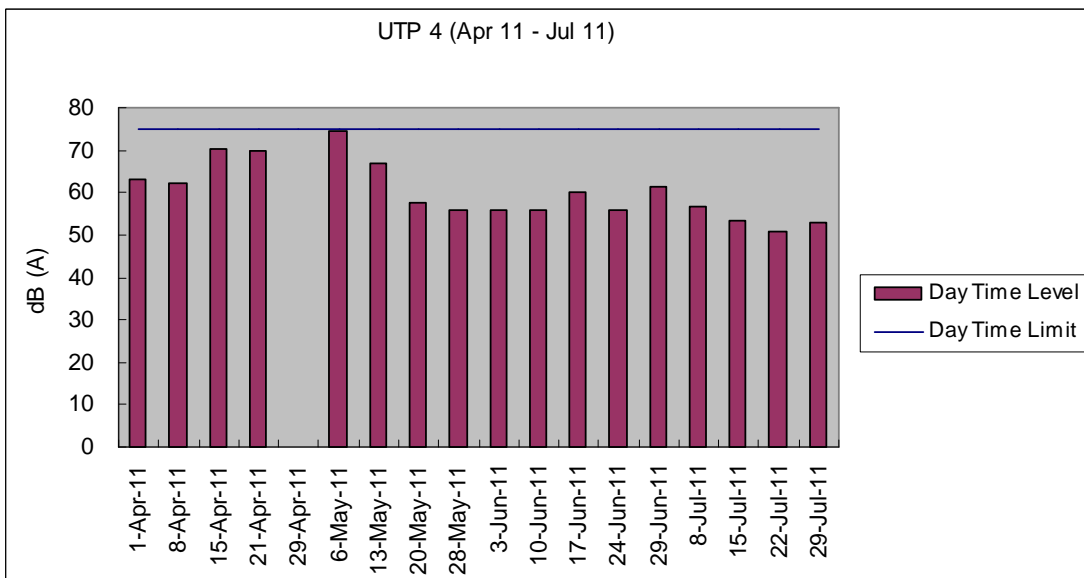
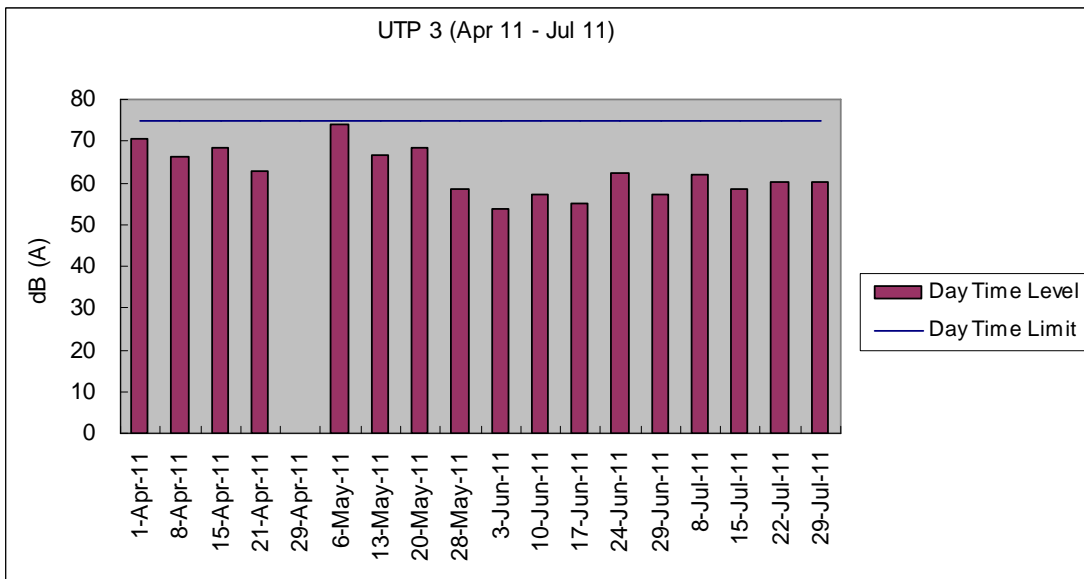
Location	Leq 30min	L ₁₀ 30min	L ₉₀ 30min	Date	Time Duration	Major Construction Noise	Other Noise source	Weather	Location description
UTP 1	64.8	68.2	58.5	29-Jul-11	15:45-16:15	N/A	Traffic & Public noise , Background noise	Cloudy	Façade
UTP 2	61.5	58.7	46.7	29-Jul-11	14:45-15:15	N/A	Traffic noise & Background noise	Cloudy	Façade
UTP 3	60.2	60.9	58.3	29-Jul-11	13:30-14:00	N/A	Background noise & Public noise	Cloudy	Façade
UTP 4	52.8	52.8	50.5	29-Jul-11	13:00-14:00	N/A	Background noise & Public noise	Cloudy	Façade
UTP 5	55.9	55.8	52.0	29-Jul-11	13:00-13:30	N/A	Background noise & Public noise	Cloudy	Façade
UTP 6	57.0	54.5	46.3	29-Jul-11	10:00-10:30	N/A	Background noise & Public noise	Cloudy	Façade
UTP 7	55.5	57.1	49.3	29-Jul-11	10:30-11:00	N/A	Background noise & Public noise	Cloudy	Façade
UTP 8	56.3	56.9	55.1	29-Jul-11	11:00-11:30	N/A	Background noise & Public noise	Cloudy	Façade
UTP 9	62.5	55.6	52.3	29-Jul-11	11:30-12:00	N/A	Background noise	Cloudy	Façade
UTP 10	54.1	57.6	50.9	29-Jul-11	9:30-10:00	N/A	Background noise	Cloudy	Façade
UTP 11	57.0	59.5	47.2	29-Jul-11	9:00-9:30	N/A	Background noise & Public noise	Cloudy	*Free field

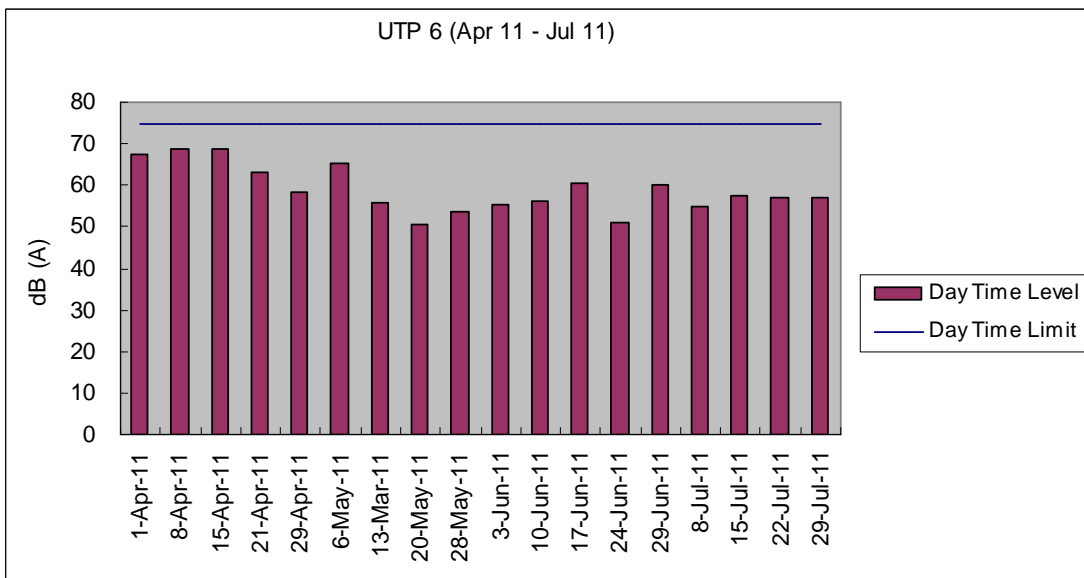
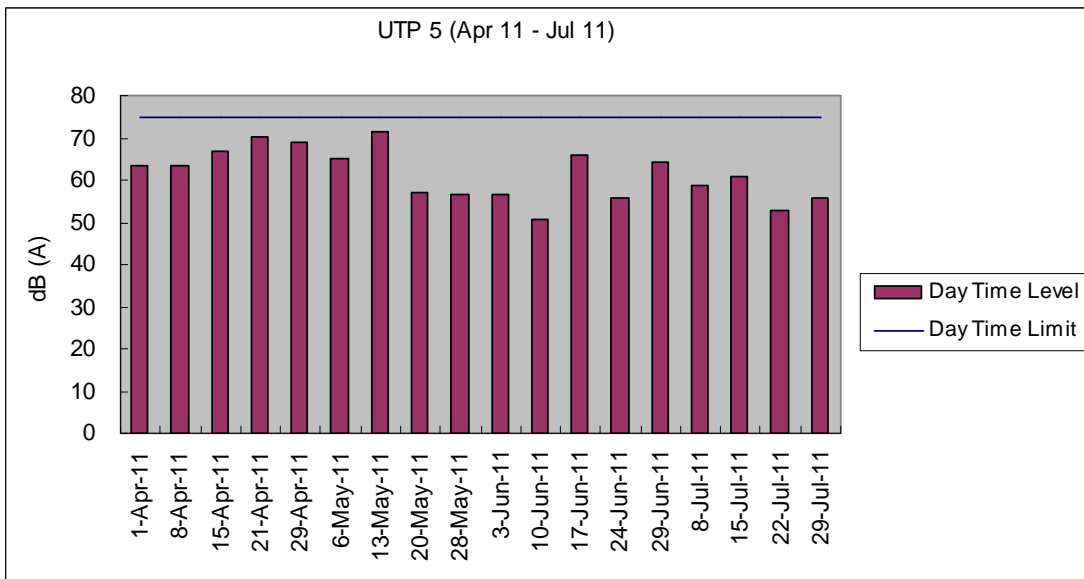
Note* An Additional of 3dB(A) had been added to the measurement result due to Free Field Correction

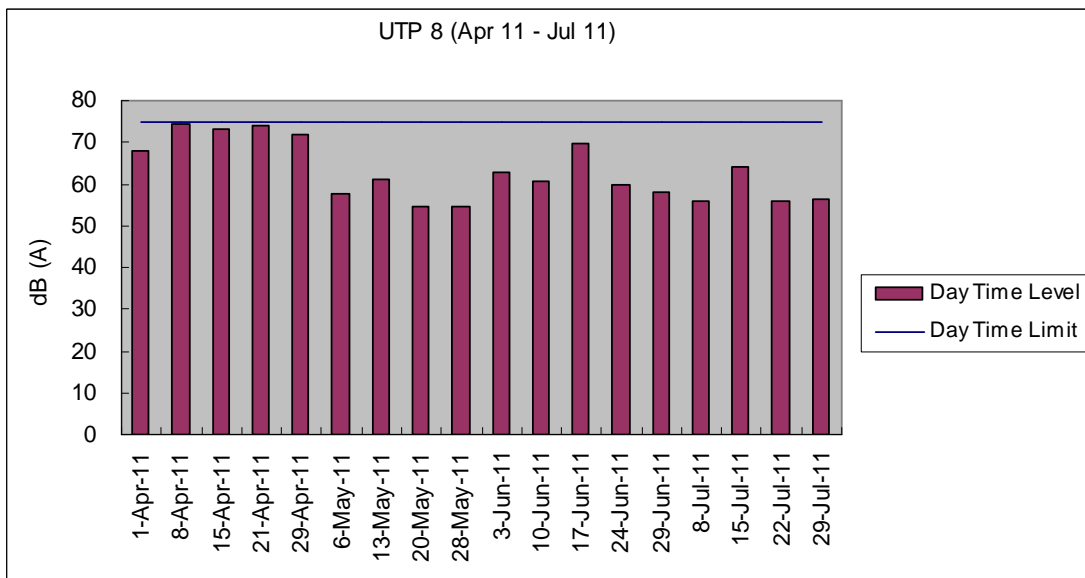
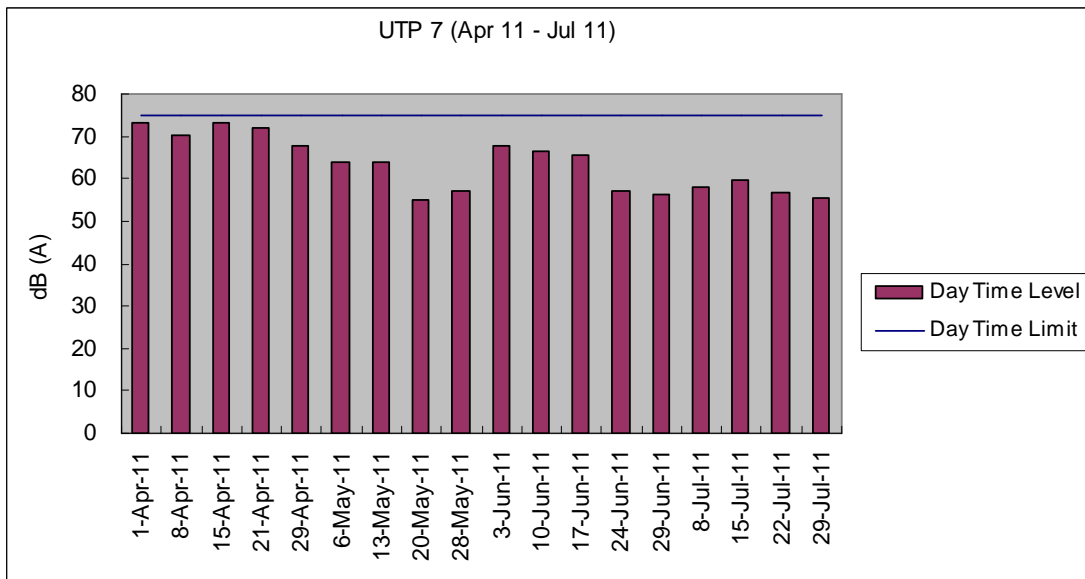
Graphical plot for noise measurements

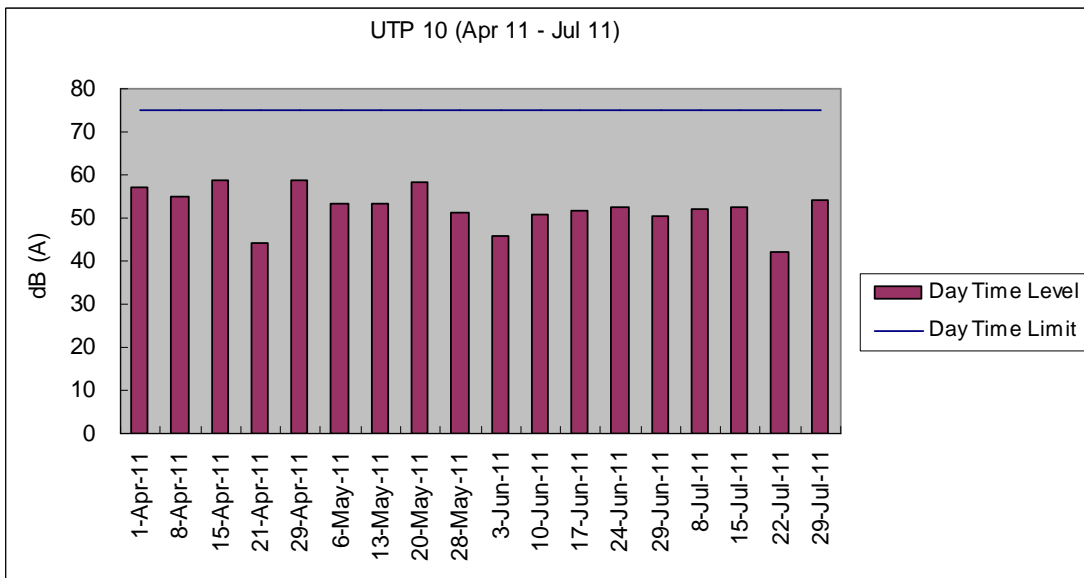
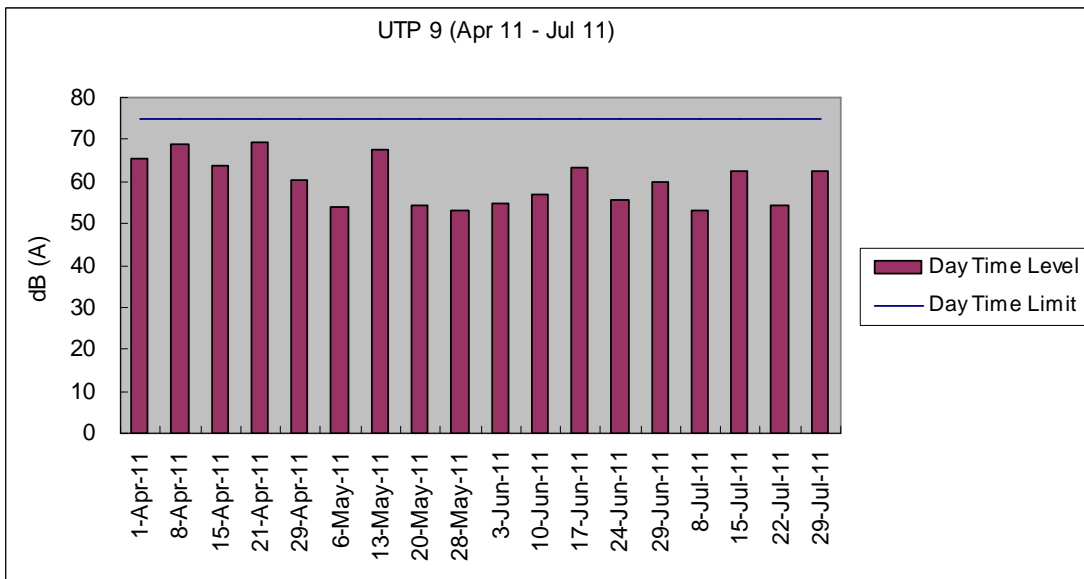
The followings were the graphical plots for the 11 monitoring locations. Each plot showed the date of measurement taken, day time limit of 75 dB(A) as well as the measured daytime level for each location. The graphs contain the data recorded from April 2011 to July 2011.

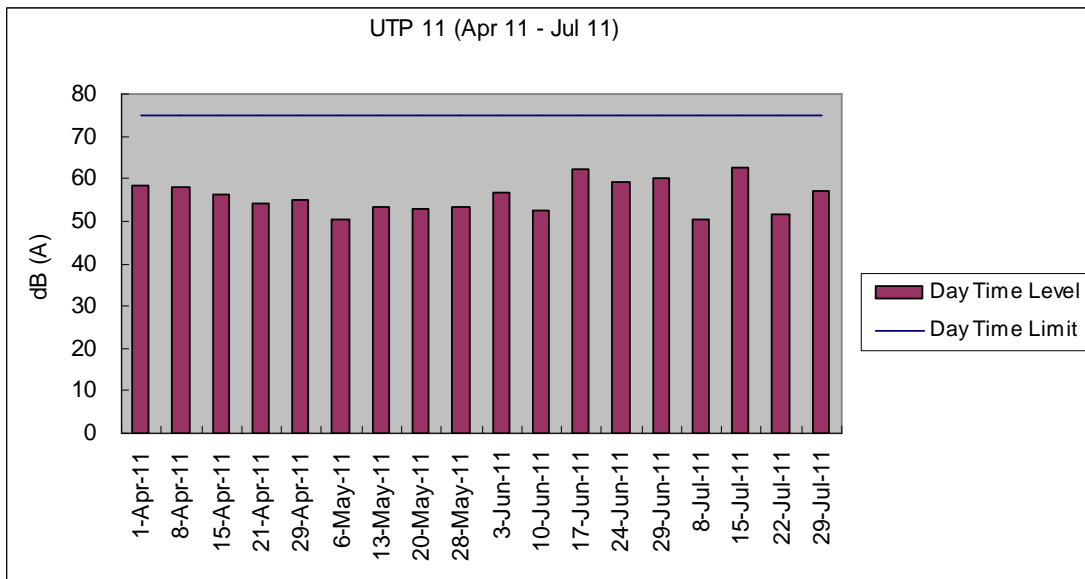


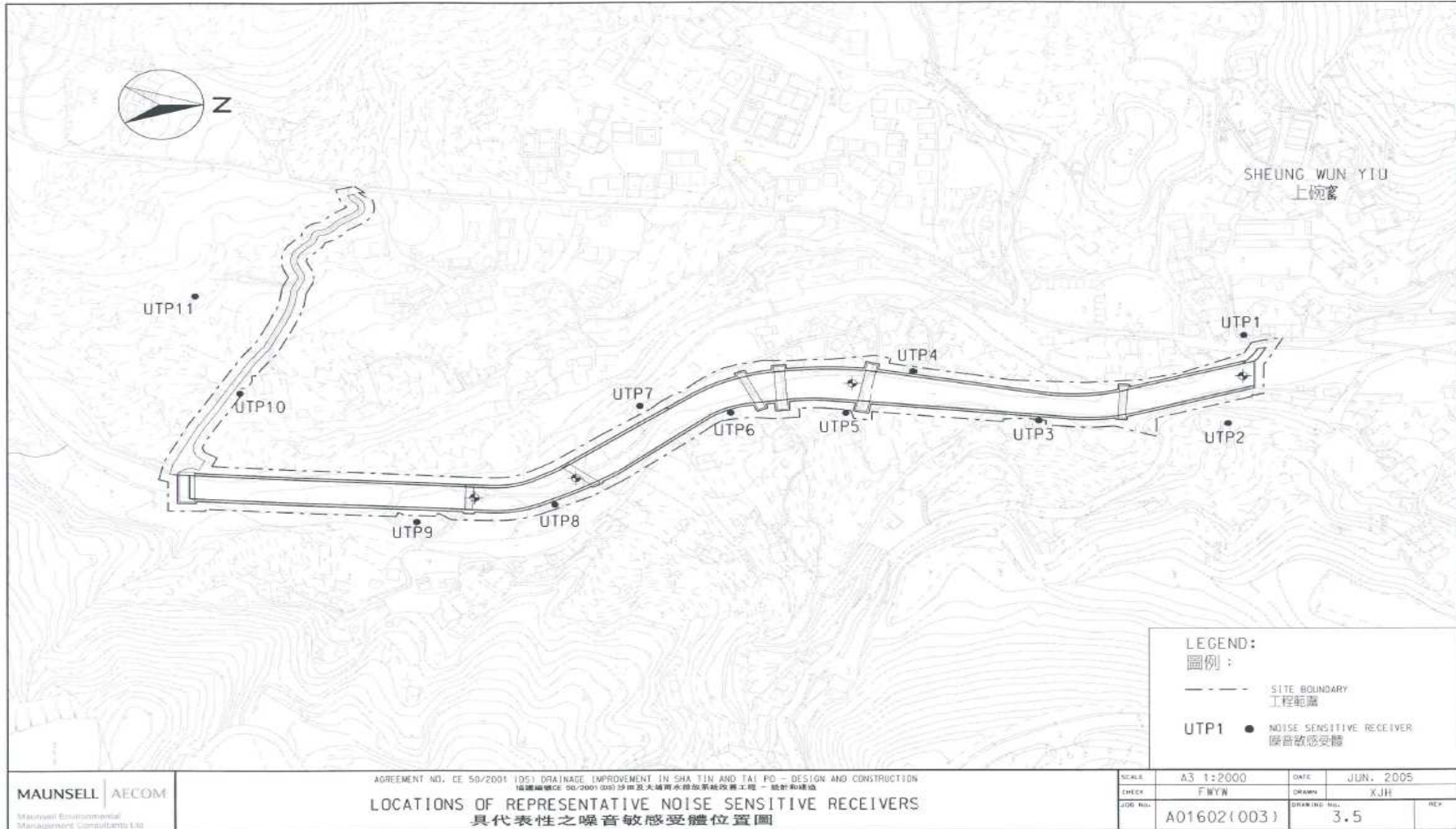












Appendix E: Monitoring schedule for the present and next reporting period

Master Schedule of EM&A works in July 2011

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
26/06	27/06	28/06	29/06	30/06	01/07	02/07
			Noise Monitoring Site inspection at afternoon		Ecological site inspection	
03/07	04/07	05/07	06/07	07/07	08/07	09/07
			Site inspection at afternoon		Noise Monitoring	
10/07	11/07	12/07	13/07	14/07	15/07	16/07
	Ecological site inspection		Site inspection and at afternoon		Noise Monitoring	
17/07	18/07	19/07	20/07	21/07	22/07	23/07
	Ecological site inspection			Ecological Impact Monitoring for Upper Tai Po River, Site inspection and SSEMC at afternoon	Noise Monitoring	
24/07	25/07	26/07	27/07	28/07	29/07	30/07
	Ecological site inspection		Site inspection at afternoon		Noise Monitoring	Ecological site inspection
31/07						

Master Schedule of EM&A works in August 2011

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	01/08	02/08	03/08	04/08	05/08	06/08
	Ecological site inspection		Site inspection at afternoon		Noise Monitoring	
07/08	08/08	09/08	10/08	11/08	12/08	13/08
	Ecological site inspection		Site inspection at afternoon		Noise Monitoring	
14/08	15/08	16/08	17/08	18/08	19/08	20/08
	Ecological site inspection		Site inspection and at afternoon		Noise Monitoring	
21/08	22/08	23/08	24/08	25/08	26/08	27/08
	Ecological site inspection	Site inspection and SSEMC at afternoon			Noise Monitoring	
28/08	29/08	30/08	31/08			
	Ecological site inspection		Site inspection at afternoon Ecological site inspection			

Appendix F: Cumulative complaint log

Environmental Parameters	Cumulative no. Brought forward	No. of complaint July 2011	Overall Total
Air/Dust	3	0	3
Noise	5	0	5
Water	9	0	9
House Keeping Hygiene	0	0	0
Chemical waste	0	0	0
Total	17	0	17

Appendix G: Implementation status of environmental protection and mitigation measures

Implementation status of environmental protection and mitigation

Environmental Aspect	Protection / Mitigation Measures	Implementation status	Follow-up action
Construction Noise	No percussive piling shall be carried out	Implemented	Not required
	-Use well maintained construction plant	Implemented	Not required
	-Shut down plants between work periods	Implemented	Not required
	-Install silencers on construction equipment	Implemented	Not required
	-Locate mobile plant far away from NSRs	Implemented	Not required
	-Quiet plants should be used	Implemented	Not required
	-2m high temporary noise barriers, as stipulated in EP condition 2.9, shall be installed	Implemented	Not required
Fugitive Dust Emission	-Implement regular watering and vehicle washing facilities	Implemented	Not required
	-Cover excavated or stockpile of dusty material by impervious sheeting or sprayed with water	Implemented	Not required
	-Use tarpaulin to cover dusty materials on vehicles	Implemented	Not required
Water Quality	Excavation works within the Tai Po River within the Project shall be carried out in stages and excavation area for each stage shall be limited to section of half width of the channel and less than 100m long at any one time in order to maintain water flow within the river during construction stage	Implemented	Not required
	Land-based plant shall be employed and site run-off shall be directed towards regularly cleaned and maintained silt traps and oil / grease separators to minimize leakage and loss of sediments during excavation	Implemented	Not required
	Large boulders removed from the Tai Po River within the Project during excavation shall be re-instated upon completion of works A section of 150m long natural riverbank on the western side of the river channel (Ch0 –Ch150) shall be retained	Implemented	Not required
	The excavation area shall be enclosed with bunds or barriers and dewatered prior to excavation to minimize the impacts upon the downstream of the Tai Po River	Implemented	Not required

	Provide silt trap and oil interceptor to remove the oil, lubricants, grease, silt, grit and debris from the wastewater before pumped to the public storm water drainage system	Implemented	Not required
	Provide site toilet facilities	Implemented	Not required
Waste Management	Reuse excavated material as far as possible	Implemented	Not required
	Recycle scrap metals or abandoned equipment	Implemented	Not required
	Adopt a trip ticket system for the disposal of C&D materials	Implemented	Not required
	All general refuse should be segregated and stored in enclosed bins or compaction units	Implemented	Not required
Vibration	Percussive piling is to be replaced by bore-hole piling to minimize vibration impacts to the two identified Declared monuments	Not applicable at this stage	Not required
	Carrying out of vibration monitoring to ensure that vibration associated with the construction phase do not exceed the threshold limit otherwise contractor have to review the work method and construction activities have to be slow down or rescheduled to reduce the impacts	Not applicable at this stage	Not required
	Close monitoring and measurement on the cracks of the external wall of Fan Sin Temple during construction works will be carried out. Any changes on the cracks will be recorded for the contractor to slow down the construction activities accordingly; and to review the work methods and equipments immediately	Not Applicable at this stage	Not required

Implementation status of environmental protection and mitigation for ecology,
 prepared by the Ecologist, Dr. Mark Shea.

Environmental Aspect	Protection / Mitigation Measures	Implementation status	Follow-up action
Ecology	Large boulders will be returned to the riverbed following the excavation works.	Not applicable	Not required
	Construction works from Ch. 0.0m – Ch. 150m would be along one side of the river only	Not applicable	Not required
	Approximately 150m of the existing natural riverbank on the western side of the river would be retained.	Implemented	Not required
	Excavation works within the river channel should be restricted to an enclosed dewater section of the river, and would be limited to sections 50-100m long at any one time.	Implemented	Not required
	Flows to the area downstream shall be maintained at all times during the construction phase	Implemented	Not required
	Capture survey shall be conducted within the Tai Po River before commencement of works. The captured target species shall be relocated to areas of the watercourse upstream of the watercourse upstream of the Tai Po River	Capture surveys had been conducted at the beginning of the Contract, during the wet season July/August 2008 and 4 th November 2008	Not required
	Temporary noise barriers should be constructed to control noise impacts to habitats and associated wildlife within and adjacent to the proposed works area	Implemented	Not required
	Excavation works shall be carried out by land based plant within enclosed dry section of river channel.	Implemented	Not required
	Compensatory planting of trees and other vegetation along the banks of the newly improved drainage channel should be provided to compensate for the loss of riparian vegetation.	Not applicable	Not required
	Operation phase activities in the improved drainage channel would be limited to periodic channel maintenance such as de-silting.	Not applicable	Not required

Appendix H: Cumulative waste flow table

Cumulative waste flow table showing amount of wastes generated, reused and disposed since 15th September 2008

Type of waste	Inert Waste			Non-Inert Waste			Chemical Waste	
	Amount generated	Amount reused	Amount disposed	Amount generated	Amount reused	Amount disposed	Amount generated	Amount disposed*
Year 2008 to 2009	36.9m ³	0	36.9m ³	2.000 tonnes	0	2.000 tonnes	20kg	20kg
Year 2010	1955m ³	1955m ³	0	0.192 tonnes	0	0.192 tonnes	0	0
January 2011	117m ³	117m ³	0	0.040 tonnes	0	0.040 tonnes	0	0
February 2011	581m ³	581m ³	0	0.045 tonnes	0	0.045 tonnes	0	0
March 2011	927m ³	927m ³	0	0.047 tonnes	0	0.047 tonnes	0	0
April 2011	467m ³	467m ³	0	0.050 tonnes	0	0.050 tonnes	0	0
May 2011	835 m ³	835 m ³	0	0.015 tonnes	0	0.015 tonnes	0	0
June 2011	3 m ³	3 m ³	0	0.001 tonnes	0	0.001 tonnes	0	0
July 2011	0	0	0	0	0	0	0	0
Total	4921.9m³	4885m³	36.9m³	2.390 tonnes	0	2.390 tonnes	20kg	20kg

Remark*: Chemical wastes generated from the project sites including Upper Tai Po River, Lam Tsuen River and She Shan River were centralized for disposal.

Appendix I: Construction programme (Rev. No. 15)

Drainage Services Department
 Contract No. DC/2007/06
River Improvement Works in Upper Lam Tsuen River, She Shan River and Upper Tai Po River

Revised Master Programme Rev (15)

ID	任務名稱	Duration	Start	Finish	2010				2011				2012				2013	
					Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2		
1072	Install Stone Facing	14 days	2/6/2011	18/6/2011														
1073	Reinstatement of River bed Variation Order No. 178	3 days	20/6/2011	22/6/2011														
1074		37 days	23/6/2011	5/8/2011														
1075	Temp. Haul Road Diversion	7 days	23/6/2011	30/6/2011														
1076	Excavation	14 days	27/7/2011	18/7/2011														
1077	Formwork	7 days	19/7/2011	26/7/2011														
1078	Re-BAR	7 days	27/7/2011	3/8/2011														
1079	Concrete	2 days	4/8/2011	5/8/2011														
1080	Programme of Upper Tai Po River	1747 days?	28/9/2007	31/10/2012														
1081	Wei Season of 2010	184 days	1/4/2010	1/10/2010														
1082	Wei Season of 2011	183 days	1/4/2011	1/11/2011														
1083	Wei Season of 2012	184 days	19/3/2012	31/10/2012														
1084	Works Suspended Due to Villager's Ball	42 days?	7/11/2010	18/12/2010														
1085		1615 days?	28/9/2007	24/5/2012														
1086	Gabion Wall (Ch 230-275 RHS) TG1/TG1A	40 days	28/1/2011	9/3/2011														
1087	Excavation and Formation	20 days	28/1/2011	16/2/2011														
1088	Gabion Wall Construction (Ch 235-275 LHS)	14 days	17/2/2011	2/3/2011														
1089	Backfilling	6 days	3/3/2011	25/11/2011														
1090	Retaining Wall (Ch 275-330 RHS) TR1 (replaced by AD1)	220 days?	3/3/2011	25/11/2011														
1091	Excavation and Formation	12 days	3/3/2011	16/3/2011														
1092	Laying Concrete block and gabion units (Ch275-330 RHS)	12 days	17/3/2011	30/3/2011														
1093	Backfilling	6 days	31/3/2011	7/4/2011														
1094	Excavation and Formation	7 days	12/11/2011	19/11/2011														
1095	Laying Concrete block and gabion units (Ch320-330 RHS)	4 days?	2/11/2011	24/11/2011														
1096	Backfilling	21 days	31/10/2011	27/10/2011														
1097	Drainage & Footpath (Ch 275-320 RHS)	16 days	10/2/2012	28/2/2012														
1098	Excavation and Formation	7 days	18/2/2012	25/2/2012														
1099	Gabion Wall (Ch 315-330 LHS) TCG2A	7 days	10/2/2012	17/2/2012														
1100	Excavation and Formation	2 days	27/2/2012	28/2/2012														
1101	Backfilling	4 days	6/2/2012	9/2/2012														
1102	Maintenance Staircase (Ch 315 LHS)	4 days	6/2/2012	9/2/2012														
1103	Formwork and concreting	4 days	6/2/2012	9/2/2012														
1104	Drainage & Footpath (Ch 307-330 LHS)	14 days	27/2/2012	13/3/2012														
1105	Construction of drainage & footpath	14 days	27/2/2012	13/3/2012														
1106	Temp Utility and Pedestrian Diversion at Ch230	171 days	23/8/2011	24/3/2012														
1107	Temp UU diversion near Ch230	39 days	29/8/2011	15/10/2011														
1108	Temp Pedestrian diversion	119 days	1/11/2011	26/3/2012														
1109	Demolition of Interim Footbridge at Ch230	7 days	12/11/2011	19/11/2011														
1110	Demolition of Interim Footbridge	7 days	12/11/2011	19/11/2011														
1111	Gabion Wall (Ch 230-257 LHS) TCG2/TG2A/TG2B	1615 days?	28/9/2007	24/5/2012														
1112	Excavation and Formation	14 days	2/11/2011	6/12/2011														
1113	Gabion Wall Construction (Ch 230-257 LHS)	7 days	7/12/2011	14/12/2011														
1114	Backfilling	3 days	15/12/2011	17/12/2011														
1115	Maintenance Staircase (Ch 242 LHS)	4 days	19/12/2011	22/12/2011														
1116	Formwork and concreting	4 days	19/12/2011	22/12/2011														
1117	Gabion Wall (Ch 257-270 LHS) TG4	11 days	23/12/2011	7/1/2012														
1118	Excavation and Formation	5 days	23/12/2011	30/12/2011														
1119	Gabion Wall Construction (Ch 257-270 LHS)	3 days	31/12/2011	4/1/2012														
1120	Backfilling	3 days	31/12/2011	7/1/2012														
1121	Retaining Wall (Ch 275-315 LHS) TR1 (replaced by AD1)	46 days	9/1/2012	5/3/2012														
1122	Excavation and Formation	21 days	9/1/2012	4/2/2012														
1123	Laying Concrete block and gabion units	18 days	6/2/2012	25/2/2012														
1124	Backfilling	7 days	27/2/2012	5/3/2012														
1125	Drainage & Footpath (Ch 200-307 LHS)	60 days	19/12/2011	3/3/2012														

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 日期: 22/9/2011

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Drainage Services Department
 Contract No. DC/2007/06
River Improvement Works in Upper Lam Tsuen River, She Shan River and Upper Tai Po River

Revised Master Programme Rev (15)

ID	任務名稱	Duration	Start	Finish	2010												2011		2012		2013		
					Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
1249	Formwork and rebar fixing for decking	18 days	23/9/2011	13/10/2011																			
1250	Concrete	1 day	14/10/2011	14/10/2011																			
1251	Stripping off formwork	14 days	15/10/2011	4/5/2011																			
1252	Railing installation	7 days	26/3/2011	2/4/2011																			
1253	Lighting at Footbridge TB02	51 days	31/1/2012	5/9/2012																			
1254	Construction of Drawings / Deckings	21 days	3/1/2012	30/1/2012																			
1255	Public lighting Installation (CE2308)	12 days	31/1/2012	13/2/2012																			
1256	Public lighting Installation (CE2309)	12 days	14/2/2012	27/2/2012																			
1257	Removal of existing lighting (VA2642-A1)	6 days	28/2/2012	5/9/2012																			
1258																							
1259																							
1260	River Bed formation (Ch. 50-130)	20 days	4/4/2011	30/4/2011																			
1261	Paving Grade 500 toe Stone	20 days	4/4/2011	30/4/2011																			
1262																							
1263	Gabion Wall (Ch. 150-178 LHS) TG3A	25 days	24/11/2011	22/12/2011																			
1264	Excavation and formation	10 days	24/11/2011	5/12/2011																			
1265	Gabion Wall construction (Ch. 150-178 LHS)	10 days	6/12/2011	16/12/2011																			
1266	Backfilling	5 days	17/12/2011	22/12/2011																			
1267	Gabion Wall (Ch. 178-230 LHS) TG5A/TG2	15 days	12/11/2011	29/11/2011																			
1268	Gabion Wall construction (Ch. 178-230 LHS)	10 days	12/11/2011	23/11/2011																			
1269	Backfilling	5 days	24/11/2011	29/11/2011																			
1270	Maintenance Staircase (Ch. 178 LHS)	4 days	17/12/2011	21/12/2011																			
1271	Formwork and concreting	4 days	17/12/2011	21/12/2011																			
1272	Drainage & Footpath (Ch. 150-Ch.230 LHS)	21 days	3/10/2011	27/10/2011																			
1273	Drainage & Footpath	21 days	3/10/2011	27/10/2011																			
1274	Gabion Wall (Ch. 100-150 RHS) TG2	25 days	6/12/2011	6/1/2012																			
1275	Excavation and formation	4 days	6/12/2011	9/12/2011																			
1276	Gabion Wall construction (Ch. 100-150 RHS)	15 days	10/12/2011	29/12/2011																			
1277	Backfilling	6 days	30/12/2011	6/1/2012																			
1278	Maintenance Staircase (Ch. 130 RHS)	4 days	7/1/2012	11/1/2012																			
1279	Formwork and concreting	4 days	7/1/2012	11/1/2012																			
1280	Drainage & Footpath (Ch. 0-150 RHS)	28 days	7/1/2012	11/2/2012																			
1281	Construction of drainage & footpath	28 days	7/1/2012	11/2/2012																			
1282																							
1283	Gabion Wall (Ch. 150-160 RHS) TG4A	14 days	12/11/2011	28/11/2011																			
1284	Excavation and formation	4 days	12/11/2011	16/11/2011																			
1285	Gabion Wall Construction (Ch. 150-160 RHS)	6 days	17/11/2011	23/11/2011																			
1286	Backfilling	4 days	24/11/2011	28/11/2011																			
1287	Gabion Wall (Ch. 160-178 RHS) TG4A	1615 days*	28/9/2007	24/9/2012																			
1288	Excavation and formation	4 days	29/11/2011	2/12/2011																			
1289	Construction of Gabion Wall (Ch. 160-178 RHS)	6 days	3/12/2011	9/12/2011																			
1290	Backfilling	4 days	10/12/2011	14/12/2011																			
1291																							
1292	Footbridge TB03 (Ch. 200)	83 days	12/11/2011	23/2/2012																			
1293	Construction of Abutment B (RHS)	29 days	12/11/2011	15/12/2011																			
1294	Excavation and Blinding	12 days	12/11/2011	25/11/2011																			
1295	Formwork and rebar fixing of base slab	5 days	26/11/2011	1/12/2011																			
1296	Concreting of base slab	1 day	2/12/2011	2/12/2011																			
1297	Stripping of formwork	3 days	3/12/2011	6/12/2011																			
1298	Rebar fixing and slushing formwork for column	5 days	7/12/2011	12/12/2011																			
1299	Concreting	1 day	13/12/2011	13/12/2011																			
1300	Stripping of formwork	2 days	14/12/2011	15/12/2011																			
1301	Construction of Decking (TB03)	27 days	16/12/2011	19/1/2012																			
1302	Formwork and rebar fixing for decking	10 days	16/12/2011	29/12/2011																			
1303	Concreting	1 day	30/12/2011	30/12/2011																			
1304	Stripping of formwork	14 days	31/12/2011	17/1/2012																			
1305	Railing installation	2 days	18/1/2012	19/1/2012																			
1306	Lighting at Footbridge TB03	27 days	20/1/2012	23/2/2012																			
1307	Construction of Drawings / Deckings	12 days	20/1/2012	6/2/2012																			

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任務進度

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外部任務

摘要詳情

摘要詳情

Drainage Services Department
Contract No. DC/2007/06
River Improvement Works in Upper Lam Tsuen River, She Shan River and Upper Tai Po River

Revised Master Programme Rev (15)

ID	任務名稱	Duration	Start	Finish	2010												2011		2012		2013						
					Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2											
1308	Public lighting Installation (CE2321)	6 days	7/2/2012	13/2/2012																							
1309	Public lighting Installation (CE2322)	6 days	14/2/2012	20/2/2012																							
1310	T&C	1 day	21/2/2012	21/2/2012																							
1311	Removal of existing lighting (VA1309-21)	2 days	22/2/2012	23/2/2012																							
1312	Step 1 (Ch 178)	13 days	28/2/2007	10/10/2007																							
1313	Excavation and Blinding	7 days	28/9/2007	4/10/2007																							
1314	Formwork and rebar fixing for base slab	4 days	5/10/2007	8/10/2007																							
1315	Concreting of base slab	1 day	9/10/2007	9/10/2007																							
1316	Stripping off formwork	1 day	10/10/2007	10/10/2007																							
1317	River Bed formation (Ch 150-180)	6 days	11/10/2007	16/10/2007																							
1318	Piling Grade 500 Ice Stone	6 days	11/10/2007	16/10/2007																							
1319																											
1320	Cabon Wall (Ch 178-210 RHS) TG1/TG1A	34 days	16/12/2011	31/1/2012																							
1321	Excavation and formation	20 days	16/12/2011	11/1/2012																							
1322	Construction of Cabon Wall (Ch 178-210 RHS)	10 days	12/1/2012	26/1/2012																							
1323	Backfilling	4 days	27/1/2012	31/1/2012																							
1324	Cabon Wall (Ch 210-222 RHS) TG1	14 days	27/1/2012	11/2/2012																							
1325	Excavation and formation	4 days	27/1/2012	31/1/2012																							
1326	Construction of Cabon Wall (Ch 210-225 RHS)	6 days	1/2/2012	7/2/2012																							
1327	Backfilling	4 days	8/2/2012	11/2/2012																							
1328	Lighting CH 175-250	21 days	5/3/2012	28/3/2012																							
1329	Construction of Drawpits / Ductings	12 days	5/3/2012	17/3/2012																							
1330	Public lighting Installation (CE2319)	6 days	19/3/2012	24/3/2012																							
1331	Public lighting Installation (CE2320)	6 days	19/3/2012	24/3/2012																							
1332	Public lighting Installation (CE2323)	6 days	19/3/2012	24/3/2012																							
1333	Public lighting Installation (CE2324)	6 days	19/3/2012	24/3/2012																							
1334	T&C	1 day	26/3/2012	26/3/2012																							
1335	Removal of existing lighting (VE261-A1)	2 days	27/3/2012	28/3/2012																							
1336	Removal of existing lighting (VA1310-A1)	2 days	27/3/2012	28/3/2012																							
1337	River Bed formation (Ch 180-230)	14 days	18/1/2012	6/2/2012																							
1338	Piling Grade 500 Ice Stone	14 days	18/1/2012	6/2/2012																							
1339																											
1340	Ch 23-110	534 days	30/8/2010	8/5/2012																							
1341	Retaining Wall at Access D (Boulder Trap)	41 days	1/9/2010	11/10/2010																							
1342	Retaining Wall (RHS)	41 days	1/9/2010	11/10/2010																							
1343	Excavation and blinding	6 days	1/9/2010	6/9/2010																							
1344	Construction of Base Slab, Bay 2 and 4	8 days	7/9/2010	14/9/2010																							
1345	Formwork and rebar fixing	4 days	7/9/2010	10/9/2010																							
1346	Concreting	1 day	11/9/2010	11/9/2010																							
1347	Stripping off formwork	3 days	12/9/2010	14/9/2010																							
1348	Construction of Base Slab, Bay 1 and 3	8 days	15/9/2010	22/9/2010																							
1349	Formwork and rebar fixing	4 days	15/9/2010	18/9/2010																							
1350	Concreting	1 day	19/9/2010	19/9/2010																							
1351	Stripping off formwork	3 days	20/9/2010	22/9/2010																							
1352	Construction of Wall Stem, Bay 2 and 4	8 days	23/9/2010	30/9/2010																							
1353	Formwork and rebar fixing	4 days	23/9/2010	26/9/2010																							
1354	Concreting	1 day	27/9/2010	27/9/2010																							
1355	Stripping off formwork	3 days	28/9/2010	30/9/2010																							
1356	Construction of Wall Stem, Bay 1 and 3	11 days	1/10/2010	11/10/2010																							
1357	Formwork and rebar fixing	4 days	1/10/2010	4/10/2010																							
1358	Concreting	1 day	5/10/2010	5/10/2010																							
1359	Stripping off formwork	3 days	6/10/2010	8/10/2010																							
1360	Backfill the Retaining Wall	3 days	9/10/2010	11/10/2010																							
1361	Filling Work at Boulder Trap (RHS of downstream)	6 days	30/8/2010	4/9/2010																							
1362	Filling works	6 days	30/8/2010	4/9/2010																							
1363	Dwarp Wall (Ch. 60-79) RHS	23 days	12/11/2011	8/12/2011																							
1364	Excavation and Blinding	4 days	12/11/2011	16/11/2011																							
1365	Formwork and rebar fixing of base slab	5 days	17/11/2011	22/11/2011																							
1366	Concreting of base slab	1 day	23/11/2011	23/11/2011																							

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1426																					
1427																					
1428	Footbridge TB06 (Ch 400)	144 days	12/11/2011	11/5/2012																	
1429	Construction of Abutment A (LHS)	22 days	12/11/2011	7/12/2011																	
1430	Excavation and Blinding	6 days	12/11/2011	18/11/2011																	
1431	Formwork and rebar fixing of base slab	4 days	19/11/2011	23/11/2011																	
1432	Concreting of base slab	1 day	24/11/2011	24/11/2011																	
1433	Stripping off formwork	3 days	25/11/2011	28/11/2011																	
1434	Rebar fixing and shuttering formwork for column	4 days	29/11/2011	2/12/2011																	
1435	Concreting	1 day	3/12/2011	3/12/2011																	
1436	Stripping off formwork	3 days	5/12/2011	7/12/2011																	
1437	Construction of decking	24 days	12/4/2012	11/5/2012																	
1438	Formwork and rebar fixing for decking	7 days	12/4/2012	19/4/2012																	
1439	Concreting	1 day	20/4/2012	20/4/2012																	
1440	Stripping off formwork	14 days	21/4/2012	9/5/2012																	
1441	Rebar installation	2 days	10/5/2012	11/5/2012																	
1442	Lighting at Footbridge TB06	14 days	20/4/2012	8/5/2012																	
1443	Construction of Downpits / Ductings	6 days	20/4/2012	26/4/2012																	
1444	Public lighting Installation (CE2311)	3 days	27/4/2012	2/5/2012																	
1445	Public lighting Installation (CE2310)	3 days	3/5/2012	5/5/2012																	
1446	T&C	2 days	7/5/2012	8/5/2012																	
1447	Demolition of Bridge TB-C	3 days	2/4/2012	5/4/2012																	
1448	Pedestrian Diversion/Demolition works	3 days	2/4/2012	5/4/2012																	
1449	Construction of Gabion Wall at TB-C	6 days	10/4/2012	16/4/2012																	
1450	Excavation and Formation	3 days	10/4/2012	12/4/2012																	
1451	Gabion Wall Construction (Ch 230-257 LHS)	2 days	13/4/2012	14/4/2012																	
1452	Backfilling	1 day	16/4/2012	16/4/2012																	
1453	Retaining Wall (Ch 400-450 RHS) TRI (replaced by 4	30 days	3/1/2011	1/2/2011																	
1454	Excavation and Formation	12 days	3/1/2011	14/1/2011																	
1455	Laying concrete blocks and gabion blocks	12 days	15/1/2011	26/1/2011																	
1456	Backfilling	6 days	27/1/2011	1/2/2011																	
1457	Retaining Wall (Ch 400-450 LHS) TRI (replaced by 4	30 days	23/12/2011	22/2/2012																	
1458	Excavation and Formation	12 days	23/12/2011	9/1/2012																	
1459	Laying concrete blocks and gabion blocks	12 days	10/1/2012	26/1/2012																	
1460	Backfilling	6 days	27/1/2012	2/2/2012																	
1461	Maintenance Staircase (Ch 420 LHS)	4 days	19/1/2012	26/1/2012																	
1462	Formwork and concreting	4 days	19/1/2012	26/1/2012																	
1463	River Bed Formation (Ch 400-450)	5 days	21/4/2012	26/4/2012																	
1464	Placing Grade 500 ice Stone	5 days	21/4/2012	26/4/2012																	
1465																					
1466	Step 5 (Ch 410)	7 days	21/4/2012	30/4/2012																	
1467	Excavation and Blinding	3 days	21/4/2012	24/4/2012																	
1468	Formwork and rebar fixing for base slab	2 days	25/4/2012	26/4/2012																	
1469	Concreting of base slab	1 day	27/4/2012	27/4/2012																	
1470	Stripping off formwork	1 day	30/4/2012	30/4/2012																	
1471																					
1472	Box Chvert TB01 (Ch 450)	40 days	10/3/2011	29/4/2011																	
1473	Construction of Base Slab	21 days	10/3/2011	24/2/2011																	
1474	Excavation and Blinding	6 days	10/3/2011	16/3/2011																	
1475	Formwork and rebar fixing	8 days	17/3/2011	25/3/2011																	
1476	Concreting	2 days	26/3/2011	28/3/2011																	
1477	Stripping off formwork	5 days	29/3/2011	2/4/2011																	
1478	Construction of Wall Stem and Top Slab	19 days	4/4/2011	29/4/2011																	
1479	Formwork and rebar fixing	4 days	4/4/2011	8/4/2011																	
1480	Concreting	1 day	9/4/2011	9/4/2011																	
1481	Stripping off formwork	14 days	11/4/2011	29/4/2011																	
1482																					
1483	Drainage & Footpath (Ch350-450) LHS & RHS	47 days	31/1/2012	23/2/2012																	
1484	Drainage & Footpath (Ch350-450) LHS & RHS	42 days	31/1/2012	23/2/2012																	

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1485																			
1486	Lighting at CH 350-380	23 days	24/2/2012	21/3/2012															
1487	Construction of Drawings / Ductings	14 days	24/2/2012	10/3/2012															
1488	Public Lighting Installation (CE2312)	7 days	13/3/2012	19/3/2012															
1489	T&C	2 days	20/3/2012	21/3/2012															
1490																			
1491	Ch 450-525	1615 days	28/9/2007	24/5/2012															
1492	Retaining Wall (Ch 450-500) TR2 (RHS)	57 days	12/11/2011	20/1/2012															
1493	Excavation and Formation	15 days	12/11/2011	26/11/2011															
1494	Base Slab Construction Bay 1 (RHS)	8 days	30/11/2011	8/12/2011															
1495	Formwork and rebar fixing	6 days	30/11/2011	6/12/2011															
1496	Concreting	1 day	7/12/2011	7/12/2011															
1497	Stripping off formwork	1 day	8/12/2011	8/12/2011															
1498	Wall Stem Construction Bay 1 (RHS)	6 days	9/12/2011	15/12/2011															
1499	Formwork and rebar fixing	4 days	9/12/2011	13/12/2011															
1500	Concreting	1 day	14/12/2011	14/12/2011															
1501	Stripping off formwork	1 day	15/12/2011	15/12/2011															
1502	Base Slab Construction Bay 2 (RHS)	8 days	9/12/2011	17/12/2011															
1503	Formwork and rebar fixing	6 days	9/12/2011	15/12/2011															
1504	Concreting	1 day	16/12/2011	16/12/2011															
1505	Stripping off formwork	1 day	17/12/2011	17/12/2011															
1506	Wall Stem Construction Bay 2 (RHS)	6 days	19/12/2011	24/12/2011															
1507	Formwork and rebar fixing	4 days	19/12/2011	22/12/2011															
1508	Concreting	1 day	23/12/2011	23/12/2011															
1509	Stripping off formwork	1 day	24/12/2011	24/12/2011															
1510	Base Slab Construction Bay 3 (RHS)	8 days	30/11/2011	8/12/2011															
1511	Formwork and rebar fixing	6 days	30/11/2011	6/12/2011															
1512	Concreting	1 day	7/12/2011	7/12/2011															
1513	Stripping off formwork	1 day	8/12/2011	8/12/2011															
1514	Wall Stem Construction Bay 3 (RHS)	6 days	9/12/2011	15/12/2011															
1515	Formwork and rebar fixing	4 days	9/12/2011	13/12/2011															
1516	Concreting	1 day	14/12/2011	14/12/2011															
1517	Stripping off formwork	1 day	15/12/2011	15/12/2011															
1518	Base Slab Construction Bay 4 (incl. Step 6)(RHS)	10 days	9/12/2011	20/12/2011															
1519	Formwork and rebar fixing	8 days	9/12/2011	17/12/2011															
1520	Concreting	1 day	19/12/2011	19/12/2011															
1521	Stripping off formwork	1 day	20/12/2011	20/12/2011															
1522	Wall Stem Construction Bay 4 (RHS)	6 days	21/12/2011	29/12/2011															
1523	Formwork and rebar fixing	4 days	21/12/2011	24/12/2011															
1524	Concreting	1 day	28/12/2011	28/12/2011															
1525	Stripping off formwork	1 day	29/12/2011	29/12/2011															
1526	Base Slab Construction Bay 5 (incl. Step 6) (RHS)	13 days	29/12/2011	13/1/2012															
1527	Formwork and rebar fixing	8 days	29/12/2011	7/1/2012															
1528	Concreting	1 day	9/1/2012	9/1/2012															
1529	Stripping off formwork	4 days	10/1/2012	13/1/2012															
1530	Wall Stem Construction Bay 5 (RHS)	6 days	14/1/2012	20/1/2012															
1531	Formwork and rebar fixing	4 days	14/1/2012	18/1/2012															
1532	Concreting	1 day	19/1/2012	19/1/2012															
1533	Stripping off formwork	1 day	20/1/2012	20/1/2012															
1534																			
1535	Retaining Wall (Ch 450-500) TR2 (LHS)	70 days	28/12/2011	22/3/2012															
1536	Demolition of House 2 Sha Po Tsai	7 days	28/12/2011	5/1/2012															
1537	Excavation and Formation	15 days	20/1/2012	9/2/2012															
1538	Base Slab Construction Bay 1 (LHS)	8 days	10/2/2012	18/2/2012															
1539	Formwork and rebar fixing	6 days	10/2/2012	16/2/2012															
1540	Concreting	1 day	17/2/2012	17/2/2012															
1541	Stripping off formwork	1 day	18/2/2012	18/2/2012															
1542	Wall Stem Construction Bay 1 (LHS)	5 days	18/2/2012	23/2/2012															
1543	Formwork and rebar fixing	4 days	18/2/2012	22/2/2012															

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1544	Concreting	1 day	20/2/2012	20/2/2012																
1545	Stripping off formwork	1 day	23/2/2012	23/2/2012																
1546	Base Slab Construction Bay 2 (LHS)	8 days	18/2/2012	27/2/2012																
1547	Formwork and rebar fixing	6 days	18/2/2012	24/2/2012																
1548	Concreting	1 day	25/2/2012	25/2/2012																
1549	Stripping off formwork	1 day	27/2/2012	27/2/2012																
1550	Wall Stem Construction Bay 2 (LHS)	6 days	28/2/2012	5/3/2012																
1551	Formwork and rebar fixing	4 days	28/2/2012	2/3/2012																
1552	Concreting	1 day	3/3/2012	3/3/2012																
1553	Stripping off formwork	1 day	5/3/2012	5/3/2012																
1554	Base Slab Construction Bay 3 (LHS)	8 days	24/2/2012	3/3/2012																
1555	Formwork and rebar fixing	6 days	24/2/2012	1/3/2012																
1556	Concreting	1 day	2/3/2012	2/3/2012																
1557	Stripping off formwork	1 day	3/3/2012	3/3/2012																
1558	Wall Stem Construction Bay 3 (LHS)	6 days	5/3/2012	10/3/2012																
1559	Formwork and rebar fixing	4 days	5/3/2012	8/3/2012																
1560	Concreting	1 day	9/3/2012	9/3/2012																
1561	Stripping off formwork	1 day	10/3/2012	10/3/2012																
1562	Base Slab Construction Bay 4 (incl. Step 6)(LHS)	10 days	18/2/2012	29/2/2012																
1563	Formwork and rebar fixing	8 days	18/2/2012	27/2/2012																
1564	Concreting	1 day	28/2/2012	28/2/2012																
1565	Stripping off formwork	1 day	29/2/2012	29/2/2012																
1566	Wall Stem Construction Bay 4 (RHS)	6 days	1/3/2012	7/3/2012																
1567	Formwork and rebar fixing	4 days	1/3/2012	5/3/2012																
1568	Concreting	1 day	6/3/2012	6/3/2012																
1569	Stripping off formwork	1 day	7/3/2012	7/3/2012																
1570	Base Slab Construction Bay 5 (incl. Step 6) (RHS)	13 days	8/3/2012	22/3/2012																
1571	Formwork and rebar fixing	8 days	8/3/2012	16/3/2012																
1572	Concreting	1 day	17/3/2012	17/3/2012																
1573	Stripping off formwork	4 days	19/3/2012	22/3/2012																
1574																				
1575	Drainage & Footpath (Ch 450-490 RHS)	1596 days	28/9/2007	2/5/2012																
1576	Construction of drainage & footpath	1 day	2/5/2012	2/5/2012																
1577																				
1578	Retaining Wall (Ch 500-530) TR3 (RHS)	1 day	28/9/2007	28/9/2007																
1579	Excavation and Formation	34 days	16/3/2011	28/4/2011																
1580	Base Slab Construction Bay 1 (incl. Step 7) (RHS)	12 days	16/3/2011	29/3/2011																
1581	Formwork and rebar fixing	8 days	30/3/2011	8/4/2011																
1582	Concreting	6 days	30/3/2011	6/4/2011																
1583	Stripping off formwork	1 day	7/4/2011	7/4/2011																
1584	Wall Stem Construction Bay 1 (RHS)	1 day	8/4/2011	8/4/2011																
1585	Formwork and rebar fixing	6 days	9/4/2011	15/4/2011																
1586	Concreting	4 days	9/4/2011	13/4/2011																
1587	Stripping off formwork	1 day	14/4/2011	14/4/2011																
1588	Base Slab Construction Bay 2 (incl. Step 7)(RHS)	8 days	15/4/2011	15/4/2011																
1589	Formwork and rebar fixing	6 days	9/4/2011	15/4/2011																
1590	Concreting	1 day	16/4/2011	16/4/2011																
1591	Stripping off formwork	1 day	18/4/2011	18/4/2011																
1592	Wall Stem Construction Bay 2 (RHS)	6 days	19/4/2011	28/4/2011																
1593	Formwork and rebar fixing	4 days	19/4/2011	26/4/2011																
1594	Concreting	1 day	27/4/2011	27/4/2011																
1595	Stripping off formwork	1 day	28/4/2011	28/4/2011																
1596																				
1597	Cascades (Ch 500 LHS)	12 days	21/1/2012	7/2/2012																
1598	Excavation	4 days	27/1/2012	28/1/2012																
1599	Formwork and rebar fixing	6 days	30/1/2012	4/2/2012																
1600	Concreting	1 day	6/2/2012	6/2/2012																
1601	Stripping off formwork	1 day	7/2/2012	7/2/2012																
1602																				

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1603																		
1604	Retaining Wall (Ch 500-530) TR3 (LHS)	34 days	7/22/2012	16/9/2012														
1605	Excavation and Formation	6 days	7/22/2012	13/2/2012														
1606	Base Slab Construction Bay 1 (incl. Step 7)(LHS)	8 days	14/2/2012	22/2/2012														
1607	Formwork and rebar fixing	6 days	14/2/2012	20/2/2012														
1608	Concreting	1 day	21/2/2012	21/2/2012														
1609	Stripping off formwork	1 day	22/2/2012	22/2/2012														
1610	Wall Stem Construction Bay 1 (LHS)	6 days	23/2/2012	29/2/2012														
1611	Formwork and rebar fixing	4 days	23/2/2012	27/2/2012														
1612	Concreting	1 day	28/2/2012	28/2/2012														
1613	Stripping off formwork	1 day	29/2/2012	29/2/2012														
1614	Base Slab Construction Bay 2 (incl. Step 7)(LHS)	8 days	1/3/2012	9/3/2012														
1615	Formwork and rebar fixing	6 days	1/3/2012	7/3/2012														
1616	Concreting	1 day	8/3/2012	8/3/2012														
1617	Stripping off formwork	1 day	9/3/2012	9/3/2012														
1618	Wall Stem Construction Bay 2 (LHS)	6 days	10/3/2012	16/3/2012														
1619	Formwork and rebar fixing	4 days	10/3/2012	14/3/2012														
1620	Concreting	1 day	15/3/2012	15/3/2012														
1621	Stripping off formwork	1 day	16/3/2012	16/3/2012														
1622																		
1623	Drainage & Footpath (Ch 490-525 RHS)	14 days	29/4/2011	16/5/2011														
1624	Construction of drainage & footpath	14 days	29/4/2011	16/5/2011														
1625																		
1626	Footbridge TB07 (Ch 525)	102 days	12/11/2011	16/9/2012														
1627	Temporary Pedestrian Division	3 days	12/11/2011	15/11/2011														
1628	Demolition of existing Footbridge TB-D (Ch 525)	3 days	12/11/2011	15/11/2011														
1629	Demolition works	3 days	16/11/2011	18/11/2011														
1630	Construction of Abutment A	28 days	14/2/2012	16/9/2012														
1631	Excavation and Blinding	12 days	14/2/2012	27/2/2012														
1632	Formwork and rebar fixing for base slab	4 days	28/2/2012	2/3/2012														
1633	Concreting of base slab	1 day	3/3/2012	3/3/2012														
1634	Stripping off formwork	3 days	5/3/2012	7/3/2012														
1635	Rebar fixing and shuttering formwork for column	4 days	8/3/2012	12/3/2012														
1636	Concreting	1 day	13/3/2012	13/3/2012														
1637	Stripping off formwork	3 days	14/3/2012	16/3/2012														
1638	Construction of Abutment B	28 days	19/11/2011	21/12/2011														
1639	Excavation and Blinding	12 days	19/11/2011	2/12/2011														
1640	Formwork and rebar fixing for base slab	4 days	3/12/2011	7/12/2011														
1641	Concreting of base slab	1 day	8/12/2011	8/12/2011														
1642	Stripping off formwork	3 days	9/12/2011	12/12/2011														
1643	Rebar fixing and shuttering formwork for column	4 days	13/12/2011	16/12/2011														
1644	Concreting	1 day	17/12/2011	17/12/2011														
1645	Stripping off formwork	3 days	19/12/2011	21/12/2011														
1646																		
1647																		
1648	Footbridge TB07 (Ch 525)	44 days	14/3/2012	10/5/2012														
1649	Construction of decking	29 days	14/3/2012	20/4/2012														
1650	Formwork and rebar fixing for decking	12 days	14/3/2012	27/3/2012														
1651	Concreting	1 day	28/3/2012	28/3/2012														
1652	Stripping off formwork	14 days	29/3/2012	18/4/2012														
1653	Railing installation	2 days	19/4/2012	20/4/2012														
1654	Footbridge TB07 Lighting	15 days	21/4/2012	10/5/2012														
1655	Construction of Ductwork / Ducting	7 days	21/4/2012	30/4/2012														
1656	Public Lighting Installation (CE2338)	6 days	2/5/2012	8/5/2012														
1657	Public Lighting Installation (CE2329)	6 days	2/5/2012	8/5/2012														
1658	T&C	2 days	9/5/2012	10/5/2012														
1659																		
1660	Ch 525-615	471 days	15/10/2010	16/4/2012														
1661	Retaining Wall (Ch 535-546) TR4 (RHS)	26 days	30/3/2011	3/5/2011														

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					Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
1662	Excavation and Formation	5 days	30/3/2011	4/4/2011															
1663	Base Slab Construction Bay 1 (RHS)	8 days	6/4/2011	14/4/2011															
1664	Formwork and rebar fixing	6 days	6/4/2011	12/4/2011															
1665	Concreting	1 day	13/4/2011	13/4/2011															
1666	Stripping off formwork	1 day	14/4/2011	14/4/2011															
1667	Wall Stem Construction Bay 1 (RHS)	6 days	15/4/2011	21/4/2011															
1668	Formwork and rebar fixing	4 days	15/4/2011	19/4/2011															
1669	Concreting	1 day	20/4/2011	20/4/2011															
1670	Stripping off formwork	1 day	21/4/2011	21/4/2011															
1671	Base Slab Construction Bay 2 (RHS)	8 days	14/4/2011	26/4/2011															
1672	Formwork and rebar fixing	6 days	14/4/2011	20/4/2011															
1673	Concreting	1 day	21/4/2011	21/4/2011															
1674	Stripping off formwork	1 day	26/4/2011	26/4/2011															
1675	Wall Stem Construction Bay 2 (RHS)	6 days	27/4/2011	3/5/2011															
1676	Formwork and rebar fixing	4 days	27/4/2011	30/4/2011															
1677	Concreting	1 day	1/5/2011	1/5/2011															
1678	Stripping off formwork	1 day	3/5/2011	3/5/2011															
1679																			
1680	Retaining Wall (Ch. 535-540) TR4 (LHS)	38 days	28/2/2012	16/4/2012															
1681	Excavation and Formation	8 days	28/2/2012	7/3/2012															
1682	Base Slab Construction Bay 1 (LHS)	8 days	8/3/2012	16/3/2012															
1683	Formwork and rebar fixing	6 days	8/3/2012	14/3/2012															
1684	Concreting	1 day	15/3/2012	15/3/2012															
1685	Stripping off formwork	1 day	16/3/2012	16/3/2012															
1686	Wall Stem Construction Bay 1 (LHS)	6 days	17/3/2012	23/3/2012															
1687	Formwork and rebar fixing	4 days	17/3/2012	21/3/2012															
1688	Concreting	1 day	22/3/2012	22/3/2012															
1689	Stripping off formwork	1 day	23/3/2012	23/3/2012															
1690	Base Slab Construction Bay 2 (LHS)	8 days	24/3/2012	24/4/2012															
1691	Formwork and rebar fixing	6 days	24/3/2012	30/3/2012															
1692	Concreting	1 day	31/3/2012	31/3/2012															
1693	Stripping off formwork	1 day	2/4/2012	2/4/2012															
1694	Wall Stem Construction Bay 2 (LHS)	8 days	3/4/2012	16/4/2012															
1695	Formwork and rebar fixing	6 days	3/4/2012	13/4/2012															
1696	Concreting	1 day	14/4/2012	14/4/2012															
1697	Stripping off formwork	1 day	16/4/2012	16/4/2012															
1698																			
1699	Retaining Wall TR5 Ch. 546-596 LHS (AD)	190 days	15/10/2010	5/5/2011															
1700	Construction of temp haul road	25 days	15/10/2010	8/11/2010															
1701	Demolition of Existing structure at slope crest	8 days	9/11/2010	16/11/2010															
1702	Suspension of Work due to villagers rally	17 days	20/12/2010	18/1/2011															
1703	Construction of temporary ground beam	5 days	19/12/2010	23/12/2010															
1704	Trimming of rock slope (from downstream to upstream)	73 days	24/12/2010	7/3/2011															
1705	Install rock dowel	45 days	22/2/2011	14/4/2011															
1706	Construction of skin wall (from DS to US) from top	45 days	10/3/2011	5/5/2011															
1707																			
1708	Retaining Wall TR5A CH546-596 LHS	38 days	12/11/2011	28/12/2011															
1709	River diversion, Excavation and Formation	14 days	12/11/2011	28/11/2011															
1710	Base Slab Construction TR5A Bay 1 LHS	10 days	29/11/2011	9/12/2011															
1711	Formwork and rebar fixing	8 days	29/11/2011	7/12/2011															
1712	Concreting	1 day	8/12/2011	8/12/2011															
1713	Stripping off formwork	1 day	9/12/2011	9/12/2011															
1714	Wall Stem Construction TR5A Bay 1 LHS	6 days	10/12/2011	16/12/2011															
1715	Formwork and rebar fixing	4 days	10/12/2011	14/12/2011															
1716	Concreting	1 day	15/12/2011	15/12/2011															
1717	Stripping off formwork	1 day	16/12/2011	16/12/2011															
1718	Base Slab Construction TR5A Bay 2 LHS	8 days	10/12/2011	19/12/2011															
1719	Formwork and rebar fixing	6 days	10/12/2011	16/12/2011															
1720	Concreting	1 day	17/12/2011	17/12/2011															

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					Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2		
1721	Stripping off formwork	1 day	19/12/2011	19/12/2011														
1722	Wall Stem Construction TRSA Bay 2 LHS	6 days	20/12/2011	28/12/2011														
1723	Formwork and rebar fixing	4 days	20/12/2011	23/12/2011														
1724	Concreting	1 day	24/12/2011	24/12/2011														
1725	Stripping off formwork	1 day	28/12/2011	28/12/2011														
1726	Base Slab Construction TRSA Bay 3 LHS	8 days	29/11/2011	7/12/2011														
1727	Formwork and rebar fixing	6 days	29/11/2011	5/12/2011														
1728	Concreting	1 day	6/12/2011	6/12/2011														
1729	Stripping off formwork	1 day	7/12/2011	7/12/2011														
1730	Wall Stem Construction TRSA Bay 3 LHS	6 days	8/12/2011	14/12/2011														
1731	Formwork and rebar fixing	4 days	8/12/2011	12/12/2011														
1732	Concreting	1 day	13/12/2011	13/12/2011														
1733	Stripping off formwork	1 day	14/12/2011	14/12/2011														
1734																		
1735	Box Culvert TB02 (ch 580)	30 days*	22/2012	7/3/2012														
1736	River diversion, Excavation and Blinding	1 day*	22/2012	22/2012														
1737	Construction of Base Slab	8 days	3/2/2012	11/2/2012														
1738	Formwork and rebar fixing	6 days	5/2/2012	9/2/2012														
1739	Concreting	1 day	10/2/2012	10/2/2012														
1740	Stripping off formwork	1 day	11/2/2012	11/2/2012														
1741	Construction of Wall Stem and Top Slab	21 days	13/2/2012	7/3/2012														
1742	Formwork and rebar fixing	6 days	15/2/2012	18/2/2012														
1743	Concreting	1 day	20/2/2012	20/2/2012														
1744	Stripping off formwork	14 days	21/2/2012	7/3/2012														
1745																		
1746	Retaining Wall TR5A & TR6 CHSS 595 LHS	39 days	10/2/2012	26/3/2012														
1747	River/Hail Road Diversion (to TR3 and TR3 RHS)	3 days	10/2/2012	13/2/2012														
1748	Excavation and Blinding	7 days	14/2/2012	21/2/2012														
1749	Base Slab Construction TR6 Bay 1 LHS	10 days	22/2/2012	3/3/2012														
1750	Formwork and rebar fixing	8 days	22/2/2012	1/3/2012														
1751	Concreting	1 day	2/3/2012	2/3/2012														
1752	Stripping off formwork	1 day	3/3/2012	3/3/2012														
1753	Wall Stem Construction TR6 Bay 1 LHS	6 days	5/3/2012	10/3/2012														
1754	Formwork and rebar fixing	4 days	5/3/2012	8/3/2012														
1755	Concreting	1 day	9/3/2012	9/3/2012														
1756	Stripping off formwork	1 day	10/3/2012	10/3/2012														
1757	Base Slab Construction TRSA Bay 4 LHS	8 days	3/3/2012	12/3/2012														
1758	Formwork and rebar fixing	6 days	3/3/2012	9/3/2012														
1759	Concreting	1 day	10/3/2012	10/3/2012														
1760	Stripping off formwork	1 day	12/3/2012	12/3/2012														
1761	Wall Stem Construction TRSA Bay 4 LHS	6 days	13/3/2012	19/3/2012														
1762	Formwork and rebar fixing	4 days	13/3/2012	16/3/2012														
1763	Concreting	1 day	17/3/2012	17/3/2012														
1764	Stripping off formwork	1 day	19/3/2012	19/3/2012														
1765	Base Slab Construction TRSA Bay 5 LHS	8 days	10/3/2012	19/3/2012														
1766	Formwork and rebar fixing	6 days	10/3/2012	16/3/2012														
1767	Concreting	1 day	17/3/2012	17/3/2012														
1768	Stripping off formwork	1 day	19/3/2012	19/3/2012														
1769	Wall Stem Construction TRSA Bay 5 LHS	6 days	20/3/2012	26/3/2012														
1770	Formwork and rebar fixing	4 days	20/3/2012	23/3/2012														
1771	Concreting	1 day	24/3/2012	24/3/2012														
1772	Stripping off formwork	1 day	26/3/2012	26/3/2012														
1773																		
1774																		
1775	Retaining Wall (ch 595-615) TR3 Bay 3)	37 days	15/12/2011	22/2/2012														
1776	River diversion, Excavation and Formation	13 days	15/12/2011	31/12/2011														
1777	Base Slab Construction Bay 3 LHS	12 days	3/1/2012	16/1/2012														
1778	Formwork and rebar fixing	10 days	3/1/2012	13/1/2012														
1779	Concreting	1 day	14/1/2012	14/1/2012														

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					Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q1	Q2		
1780	Stripping off formwork	1 day	16/12/12	16/12/12																
1781	Wall Stem Construction TR3 Bay 3 RHS	6 days	17/12/12	26/12/12																
1782	Formwork and rebar fixing	4 days	17/12/12	20/12/12																
1783	Concreting	1 day	21/12/12	21/12/12																
1784	Stripping off formwork	1 day	26/12/12	26/12/12																
1785	Wall Stem Construction TR3 Bay 3 LHS	6 days	27/12/12	2/2/2013																
1786	Formwork and rebar fixing	4 days	27/12/12	31/12/12																
1787	Concreting	1 day	1/2/2013	1/2/2013																
1788	Stripping off formwork	1 day	2/2/2013	2/2/2013																
1789																				
1790	Concrete Slab (CH546 - CH596)	27 days	5/3/2012	5/4/2012																
1791	Bay 1	9 days	5/3/2012	14/3/2012																
1792	Excavation/Blinding	3 days	5/3/2012	7/3/2012																
1793	Formwork and rebar fixing	4 days	8/3/2012	12/3/2012																
1794	Concreting	1 day	13/3/2012	13/3/2012																
1795	Stripping off formwork	1 day	14/3/2012	14/3/2012																
1796	Bay 2	9 days	15/3/2012	24/3/2012																
1797	Excavation/Blinding	3 days	15/3/2012	17/3/2012																
1798	Formwork and rebar fixing	4 days	19/3/2012	22/3/2012																
1799	Concreting	1 day	23/3/2012	23/3/2012																
1800	Stripping off formwork	1 day	24/3/2012	24/3/2012																
1801	Bay 3	9 days	5/3/2012	14/3/2012																
1802	Excavation/Blinding	3 days	5/3/2012	7/3/2012																
1803	Formwork and rebar fixing	4 days	8/3/2012	12/3/2012																
1804	Concreting	1 day	13/3/2012	13/3/2012																
1805	Stripping off formwork	1 day	14/3/2012	14/3/2012																
1806	Bay 4	9 days	15/3/2012	24/3/2012																
1807	Excavation/Blinding	3 days	15/3/2012	17/3/2012																
1808	Formwork and rebar fixing	4 days	19/3/2012	22/3/2012																
1809	Concreting	1 day	23/3/2012	23/3/2012																
1810	Stripping off formwork	1 day	24/3/2012	24/3/2012																
1811	Bay 5	9 days	26/3/2012	5/4/2012																
1812	Excavation/Blinding	3 days	26/3/2012	28/3/2012																
1813	Formwork and rebar fixing	4 days	29/3/2012	2/4/2012																
1814	Concreting	1 day	3/4/2012	3/4/2012																
1815	Stripping off formwork	1 day	5/4/2012	5/4/2012																
1816																				
1817	Drainage and Footpath (CH525-615 LHS & RHS)	48 days	12/3/2012	12/5/2012																
1818	Construction of footpath & drainage works	48 days	12/3/2012	12/5/2012																
1819	Lighting at CH 550-610	10 days	14/5/2012	24/5/2012																
1820	Construction of Downpits / Decline	6 days	14/5/2012	19/5/2012																
1821	Public lighting Installation (CE2325)	2 days	21/5/2012	22/5/2012																
1822	Public lighting Installation (CE2326)	2 days	21/5/2012	22/5/2012																
1823	Public lighting Installation (CE2327)	2 days	21/5/2012	22/5/2012																
1824	T&C	1 day	23/5/2012	23/5/2012																
1825	Removal of existing lighting (CE1601-32)	1 day	24/5/2012	24/5/2012																
1826																				
1827	Section 4 - Box Culvert at Ping Long	0 days	9/12/2009	9/12/2009																
1828	Section 4 - Box Culvert (Area A)	0 days	9/12/2009	9/12/2009																
1829	Completion of Work at Section 4	0 days	9/12/2009	9/12/2009																
1830																				
1831	Section 5 - Landscape Establishment Works (Portion B, C, D, E, F, G, H & I)	1665 days*	28/9/2007	25/7/2012																
1832	Section 5 Landscape Works	1665 days*	28/9/2007	24/7/2012																
1833	Commencement of Works	1 day	28/9/2007	28/9/2007																
1834	Material Submission	120 days	29/9/2007	26/1/2008																
1835	Submission Approval	0 days	9/2/2008	9/2/2008																
1836	Landscape Hardworks	1541 days*	13/11/2007	19/4/2012																
1837	Landscape Softworks	365 days	31/1/2011	18/4/2012																
1838	Submission of Tree Survey	400 days	29/9/2007	1/11/2008																

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					Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q1	Q2		
1839	Preservation and Protection of Preserved Trees	1265 days	2/11/2008	25/7/2012																
1840	Landscape Establishment Works	1265 days	2/11/2008	25/7/2012																
1841	Completion of Works	0 days	25/7/2012	25/7/2012																
1842																				
1843	Section 6 - Landscape Establishment Works (Portion J, K & M)	1666 days?	28/9/2007	25/7/2012																
1844	Section 6 Landscape Works	1665 days	28/9/2007	24/7/2012																
1845	Commencement of Works	1 day	28/9/2007	28/9/2007																
1846	Material Submission	120 days	29/9/2007	25/1/2008																
1847	Submission Approval	0 days	9/2/2008	9/2/2008																
1848	Landscape Hardworks	1161 days?	2/11/2008	19/4/2012																
1849	Landscape Softworks	365 days	1/2/2011	1/11/2008																
1850	Submission of Tree Survey	400 days	29/9/2007	1/11/2008																
1851	Preservation and Protection of Preserved Trees	1265 days	2/11/2008	25/7/2012																
1852	Landscape Establishment Works	1265 days	2/11/2008	25/7/2012																
1853	Completion of Works	0 days	25/7/2012	25/7/2012																
1854																				
1855	Section 7 - Landscape Establishment Works (Portion L, N & P)	1666 days?	28/9/2007	25/7/2012																
1856	Section 7 Landscape Works	1665 days	28/9/2007	24/7/2012																
1857	Commencement of Works	1 day	28/9/2007	28/9/2007																
1858	Material Submission	120 days	29/9/2007	25/1/2008																
1859	Submission Approval	0 days	9/2/2008	9/2/2008																
1860	Landscape Hardworks	1176 days?	1/11/2008	19/4/2012																
1861	Landscape Softworks	365 days	1/2/2011	1/11/2008																
1862	Submission of Tree Survey	400 days	29/9/2007	1/11/2008																
1863	Preservation and Protection of Preserved Trees	1265 days	2/11/2008	25/7/2012																
1864	Landscape Establishment Works	1265 days	2/11/2008	25/7/2012																
1865	Completion of Works	0 days	25/7/2012	25/7/2012																
1866																				
1867	Section 8 - All Remaining Work at All Portions	1301 days?	28/9/2007	3/5/2011																
1868	Commencement of Works	1 day	28/9/2007	28/9/2007																
1869	All remaining works at all Area	1300 days	29/9/2007	3/5/2011																
1870	Completion of Works	0 days	3/5/2011	3/5/2011																
1871		1 day?	28/9/2007	28/9/2007																

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